CECOS International, Inc.

Aber Road, Williamsburg, Ohio Facility

2020 Annual TSCA Report

EPA ID No. 087433744

5092 Aber Road
Williamsburg, OH 45176

June 2021

TABLE OF CONTENTS

SECTION I:
TSCA MONITORING ANALYTICAL RESULTS

SECTION I: TSCA MONITORING ANALYTICAL RESULTS

The TSCA Annual Report summarizes analytical results related to TSCA monitoring for 2020. Section I is organized as follows:

Section I, Part A – Analytical Review and Attachments

Part A includes a review of the monitoring programs at the CECOS facility. The RCRA portion of the facility is monitored by the Detection Monitoring Program (DMP) under the authority of Ohio EPA and the approved post closure plan. The pre-RCRA area of the site began to follow the Corrective Measures Implementation (CMI) Performance Monitoring Requirements under the authority of USEPA Region V in July of 1998. All the monitoring wells sampled under the DMP and CMI programs are also sampled for the TSCA parameters Total Organic Carbon (TOC) and Polychlorinated Biphenyls (PCBs). In addition, underdrains, leak detectors and streams are sampled quarterly for TSCA parameters.

The 2020 analytical review and statistical evaluation narratives are provided for reference in Attachment I of Part A of this section. The semi-annual CMI Performance Monitoring Evaluations have also been provided for reference (Attachment II of Part A). A summary of the 2020 analytical results for the TSCA parameters are also included.

Section I, Part B – 2020 TSCA Groundwater Monitoring Analytical Results

This section is comprised of quarterly TSCA monitoring analytical results (January, April, July and October sampling events) and abridged DMP analytical results (April and October sampling events). Quarterly reports have been previously submitted to the USEPA and therefore the DMP/TSCA data is only tabulated in summary tables for this report.

Section I, Part C – Other 2020 TSCA Monitoring Analytical Results

This section lists all other TSCA monitoring locations: Streams (C), Underdrains (U), Leak Detectors (LD), and the Leachate Treatment System Effluent. Analytical results have been presented chronologically by sample category.

SECTION I
PART A

ANALYTICAL REVIEW AND ATTACHMENTS

SECTION I, PART A – ANALYTICAL REVIEW AND ATTACHMENTS

Introduction

Part A includes a review of the monitoring programs at the CECOS facility. The RCRA portion of the facility is monitored by the DMP under the authority of Ohio EPA and the approved March 2019 DMP/Post Closure Plan. The pre-RCRA area of the site began to follow the Corrective Measures Implementation (CMI) Performance Monitoring Requirements under the authority of USEPA Region V in July of 1998. All the monitoring wells sampled under the DMP and CMI programs are also sampled for TSCA parameters. In addition, underdrains, leak detectors and the streams are sampled for TSCA parameters.

Discussion

Analytical results and evaluations for the monitoring activity have been previously reported with the associated reports. The dates of the 2020 report submittals are February 26, 2020, May 21, 2020, August 19, 2020, and November 11, 2020. The 2020 analytical review and statistical evaluation narratives are provided for reference (Part A, Attachment I). In summary, no PCBs were detected at or above their respective practical quantitation limits in any of the monitoring wells, surface water locations, underdrains, or leak detectors monitored in accordance with the DMP or CMI monitoring programs. Further, there were no confirmed detections of VOCs at or above their respective practical quantitation limits in samples collected from surface water locations, leak detectors, or any of the underdrains located outside the slurry wall during the 2020 sampling events. As such, the extent of VOC groundwater impact remains limited to the corrective measures area within the boundary and control of the slurry wall. The semi-annual CMI Performance Monitoring Evaluations have also been provided for reference (Part A, Attachment II). A summary of the 2020 analytical results for the TSCA parameters are also included.

SECTION 1
PART A
ATTACHMENT I

MONITORING PROGRAM
ANALYTICAL EVALUATIONS

FIRST QUARTER 2020 MONITORING REPORT
February 26, 2020

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

February 26, 2020

VIA EMAIL
Mr. Jae Lee
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: Quarterly Monitoring Report
January 2020 Sampling Event
CECOS International, Inc.
Aber Road Facility, Williamsburg, Ohio
EPA I.D. # OHD-087-433-744

Dear Mr. Lee:

Please find the attached Quarterly Monitoring Report for the January 2020 sampling event completed at CECOS International, Inc.'s (CECOS) Aber Road facility. The report was prepared by Eagon & Associates, Inc. on behalf of CECOS and contains a discussion of the January 2020 sampling results for Toxic Substances Control Act (TSCA) parameters collected from the surface water points, leak detectors, and underdrains.

Hardcopies of any items in the report are available upon request. Please contact me at (816) 521-3112 if you have any questions regarding this correspondence.

Sincerely,
CECOS International, Inc.

Michael Stewart

Michael Stewart
Area Environmental Manager

Attachment

cc: Todd Gmitro, US EPA Region 5
Tim Hull, Ohio EPA SWDO
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.
File: B.1

QUARTERLY MONITORING REPORT

JANUARY 2020 SAMPLING EVENT

Prepared for:

CECOS International, Inc.
Aber Road Facility
Williamsburg, Ohio

EPA I.D. OHD 087 433 744

Prepared by:

Eagon & Associates, Inc.
Worthington, Ohio

February 2020

Eagon & Associates, Inc.
100 West Old Wilson Bridge Road, Suite 115
Worthington, Ohio 43085
(614) 888-5760

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

On behalf of the CECOS International, Inc. Aber Road Facility, Eagon & Associates, Inc. (Eagon) has prepared this Quarterly Monitoring Report for the January 2020 surface water, leak detector, and underdrain sampling results. Samples for the Site's US EPA Toxic Substances Control Act (TSCA) parameters were collected by Eagon and laboratory analyses were performed by Eurofins TestAmerica, Inc. of Amherst, New York. The January 2020 quarterly monitoring sampling event was performed January 13 through 15, 2020. The event included sampling of the leak detectors, underdrains, and surface water monitoring locations at the Aber Road Facility.

TSCA monitoring requirements were established with US EPA's July 31, 1981 approval to dispose polychlorinated biphenyls (PCBs) in planned Secure Chemical Management Facilities (SCMFs) 6 through 17 (SCMFs 11 through 17 were never constructed) and, after negotiated revisions, were originally outlined in the March 13, 1984 document entitled "TSCA Monitoring Program." The original TSCA monitoring approach included monitoring of the leak detectors, underdrains and surface water (LD/UD/SW), as well as a site-wide TSCA-specific groundwater monitoring component that focused on both the pre-RCRA units and the RCRA regulated units at the Site. The LD/UD/SW component continues within that framework on a quarterly basis and the results for the most recent monitoring event are presented in this report.

With the later development of tailored, regulatory-program specific groundwater monitoring programs for the pre-RCRA and RCRA areas, the site-wide TSCA groundwater monitoring component was transitioned to and captured within those programs. The RCRA Detection Monitoring Program (DMP) for groundwater was originally proposed in 1989, was fully implemented by 1994, and applies to the RCRA regulated units located outside of the Corrective Measures Implementation (CMI) slurry wall. The current groundwater DMP is specified in the Detection Monitoring Plan which is part of the March 2019 RCRA Post-Closure Plan approved by Ohio EPA. The CMI post-construction groundwater monitoring program applies to the pre-RCRA areas and SCMFs 3 and 4/5 and was implemented in 1998 according to the monitoring approach outlined in the August 1996 Quality Assurance Project Plan and the March 1998 and November 1998 revisions to the CMI O&M Manual. The DMP is managed by Ohio EPA, whereas

the facility's CMI program is managed by US EPA. The DMP and CMI groundwater monitoring programs fulfill the facility's TSCA groundwater monitoring obligations via the sampling and analysis for PCBs and total organic carbon (TOC), in addition to volatile organic compounds (VOCs) specific to the DMP and CMI programs. All groundwater monitoring results collected semiannually as part of the DMP and CMI programs are reported separately to Ohio EPA and US EPA's RCRA division and are not presented herein.

2.0 SURFACE WATER SAMPLING

Pleasant Run Creek is west of the Site and generally flows south, then bears southeastward downstream toward its confluence with the East Fork of the Little Miami River located approximately two miles from the Aber Road facility. The East Branch of Pleasant Run Creek is south and east of the Site and flows southwest toward its confluence with Pleasant Run Creek at the southwestern corner of the Site (Figure 1). Surface water samples are collected on a quarterly basis at five designated sampling stations: C-2, C-6, C-9, C-10, and C-12. Locations C-2, C-6, C-9, and C-10 are located on Pleasant Run Creek (Figure 1). Location C-12 is on the East Branch of Pleasant Run Creek slightly upstream of the confluence. C-9 is the upstream/background location. C-6 is downstream of the confluence and the most downstream surface-water monitoring point.

To collect the surface water samples, the samplers position themselves downstream from each stream sample station in as near to the middle of the stream channel as possible. Pre-cleaned sample containers are then partially inverted and slowly submerged into the water. The container is then slowly rotated upright until filled and is then removed from the stream and capped. This procedure is continued until all containers are filled. Stream locations are sampled from downstream to upstream to prevent potential impacts on sample integrity or representativeness that could result from entering the stream upstream of a sampling point (e.g., by suspending sediment). Samples are not collected when there is no discernible stream flow at the respective sample location.

All five stream monitoring locations were flowing during the event and were sampled for VOCs, PCBs, and TOC.

3.0 LEAK DETECTOR SAMPLING

Leak detection systems are installed between the primary and secondary liners of SCMFs 9 and 10. These systems provide additional means to aid in the detection of contaminants in the event there is a release through the primary liner from these regulated units. Liquid within the leak detectors is collected by pumping from the riser pipes connected to the leak detection systems. The riser pipes provide access to the hydraulically interconnected components of the leak detection systems for a given cell and are identified as LD-1 and LD-2 for SCMF 9, and LD-3 and LD-4 for SCMF 10 (Figure 1)

Each leak detector riser is evacuated with a dedicated electric submersible pump. The leak detectors are purged dry or until approximately 200 gallons of water have been purged, whichever occurs first. Purge water is contained and transferred to the Site's leachate collection system. Samples are collected immediately following purging unless the location purges dry. In that case, sufficient time is allowed for recovery and the sample is then collected; typically, during the same day and no more than 24 hours after purging is completed.

The leak detectors were sampled for VOCs, PCBs, and TOC during the January 2020 quarterly monitoring event.

4.0 UNDERDRAIN SAMPLING

SCMFs 3 through 10 were constructed with underdrain dewatering systems that were operated to facilitate construction of the units. The underdrains lie below the liner systems and are in contact with natural geologic materials. The underdrains are now sampled as part of the quarterly monitoring program for the facility. The design and construction details vary between each SCMF and are documented in Section 1.2 of the RCRA Facility Closure Plan. Underdrain riser locations are shown on Figure 1 herein.

Underdrains are evacuated in a manner similar to the leak detectors using dedicated electric submersible pumps. Each underdrain is purged until approximately 200 gallons of water have been evacuated. Purge water is contained and transferred to the Site's leachate collection system. Underdrain samples are collected immediately following purging.

The underdrains were sampled for VOCs, TOC, and PCBs during the January 2020 quarterly monitoring event. Underdrain U-9 is permanently inoperable and was not sampled during the event. U-9 is located beneath SCMF 4/5, within the Corrective Measures Implementation (CMI) area slurry wall (Figure 1). Underdrains U-10, U-11, and U-12 are also located beneath SCMF 4/5 and continue to be sampled on a quarterly basis.

5.0 ANALYTICAL RESULTS

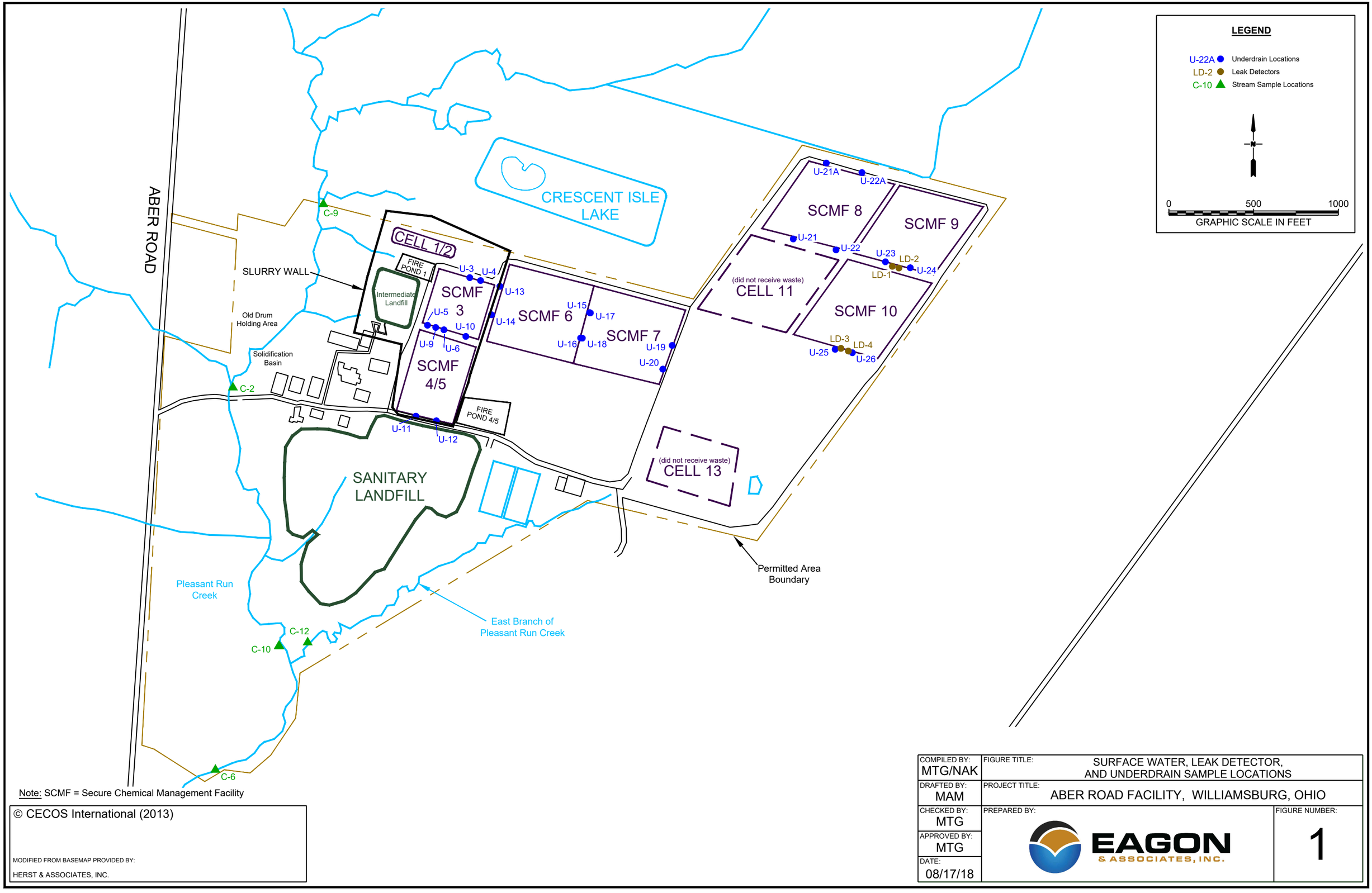
There were no quantified detections of VOCs in samples from the leak detectors or underdrains located outside of the CMI area during the January 2020 event. In addition, there were no quantified detections of VOCs in the surface water samples.

VOC detections in the January 2020 underdrain samples are summarized in Table 1. Underdrains U-3, U-4, U-5, U-6, and U-12, which are located beneath units contained within the slurry wall, exhibited quantified VOC detections of constituents that are commonly detected at those locations. Concentrations of those VOCs observed during the event were within the range of concentrations observed during previous monitoring events.

There were no detections of PCBs in any of the surface water, leak detector or underdrain samples collected during the event, which is consistent with past events.

The analytical results from the January 2020 quarterly monitoring event, including field information logs and chain-of-custody records, are presented herein in Appendix A.

FIGURES



MODIFIED FROM BASEMAP PROVIDED BY:
HERST & ASSOCIATES, INC.

COMPILED BY: MTG/NAK	FIGURE TITLE: SURFACE WATER, LEAK DETECTOR, AND UNDERDRAIN SAMPLE LOCATIONS	
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 1
APPROVED BY: MTG		
DATE: 08/17/18		

F:\AUTOCAD\CECOS\CECOS-04-2013REV\CECOS-BASEMAP-04-2013-LEAK-DETECT-FIGURE.DWG

TABLES

TABLE 1.
VOC DETECTIONS IN UNDERDRAINS
JANUARY 2020 QUARTERLY MONITORING EVENT
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Location	Detected Constituent[2]	Concentration (ug/L)
U-3[1]	1,1-Dichloroethane	26
	1,2-Dichloroethene (Total)	19
	Vinyl Chloride	1.1
U-4[1]	1,1-Dichloroethane	7.4
	1,2-Dichloroethene (Total)	25
	Vinyl Chloride	2.0
Dup TSCA #3 (U-4)[1]	1,1-Dichloroethane	7.6
	1,2-Dichloroethene (Total)	26
	Vinyl Chloride	2.3
U-5[1]	1,1-Dichloroethane	6.0
	1,2-Dichloroethene (Total)	23
	Vinyl Chloride	1.5
U-6[1]	1,1-Dichloroethane	20
	1,2-Dichloroethene (Total)	13
U-12[1]	1,2-Dichloroethene (Total)	9.8
	Vinyl Chloride	1.4

Notes:

[1] Underdrain located beneath units contained within the CMI area slurry wall

[2] Constituents reported by the laboratory as estimated concentrations ("J") below the practical quantitation limit are not shown, if applicable

SECOND QUARTER 2020 MONITORING REPORT
May 21, 2020

CECOS
INTERNATIONAL

5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

May 21, 2020

VIA EMAIL
Mr. Jae Lee
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: Quarterly Monitoring Report
April 2020 Sampling Event
CECOS International, Inc.
Aber Road Facility, Williamsburg, Ohio
EPA I.D. # OHD-087-433-744

Dear Mr. Lee:

Please find the attached Quarterly Monitoring Report for the April 2020 sampling event completed at CECOS International, Inc.'s (CECOS) Aber Road facility. The report was prepared by Eagon & Associates, Inc. on behalf of CECOS and contains a discussion of the April 2020 sampling results for Toxic Substances Control Act (TSCA) parameters collected from the surface water points, leak detectors, and underdrains.

Hardcopies of any items in the report are available upon request. Please contact me at (513) 724-6114 if you have any questions regarding this correspondence.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachment

cc: Todd Gmitro, US EPA Region 5
Tim Hull, Ohio EPA SWDO
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.
File: B.1

QUARTERLY MONITORING REPORT

APRIL 2020 SAMPLING EVENT

Prepared for:

CECOS International, Inc.
Aber Road Facility
Williamsburg, Ohio

EPA I.D. OHD 087 433 744

Prepared by:

Eagon & Associates, Inc.
Worthington, Ohio

May 2020

Eagon & Associates, Inc.
100 West Old Wilson Bridge Road, Suite 115
Worthington, Ohio 43085
(614) 888-5760

TABLE OF CONTENTS

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TABLES

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With the later development of tailored, regulatory-program specific groundwater monitoring programs for the pre-RCRA and RCRA areas, the site-wide TSCA groundwater monitoring component was transitioned to and captured within those programs. The RCRA Detection Monitoring Program (DMP) for groundwater was originally proposed in 1989, was fully implemented by 1994, and applies to the RCRA regulated units located outside of the Corrective Measures Implementation (CMI) slurry wall. The current groundwater DMP is specified in the Detection Monitoring Plan which is part of the March 2019 RCRA Post-Closure Plan approved by Ohio EPA. The CMI post-construction groundwater monitoring program applies to the pre-RCRA areas and SCMFs 3 and 4/5 and was implemented in 1998 according to the monitoring approach outlined in the August 1996 Quality Assurance Project Plan and the March 1998 and November 1998 revisions to the CMI O&M Manual. The DMP is managed by Ohio EPA, whereas

the facility's CMI program is managed by US EPA. The DMP and CMI groundwater monitoring programs fulfill the facility's TSCA groundwater monitoring obligations via the sampling and analysis for PCBs and total organic carbon (TOC), in addition to volatile organic compounds (VOCs) specific to the DMP and CMI programs. All groundwater monitoring results collected semiannually as part of the DMP and CMI programs are reported separately to Ohio EPA and US EPA's RCRA division and are not presented herein.

2.0 SURFACE WATER SAMPLING

Pleasant Run Creek is west of the Site and generally flows south, then bears southeastward downstream toward its confluence with the East Fork of the Little Miami River located approximately two miles from the Aber Road facility. The East Branch of Pleasant Run Creek is south and east of the Site and flows southwest toward its confluence with Pleasant Run Creek at the southwestern corner of the Site (Figure 1). Surface water samples are collected on a quarterly basis at five designated sampling stations: C-2, C-6, C-9, C-10, and C-12. Locations C-2, C-6, C-9, and C-10 are located on Pleasant Run Creek (Figure 1). Location C-12 is on the East Branch of Pleasant Run Creek slightly upstream of the confluence. C-9 is the upstream/background location. C-6 is downstream of the confluence and the most downstream surface-water monitoring point.

To collect the surface water samples, the samplers position themselves downstream from each stream sample station in as near to the middle of the stream channel as possible. Pre-cleaned sample containers are then partially inverted and slowly submerged into the water. The container is then slowly rotated upright until filled and is then removed from the stream and capped. This procedure is continued until all containers are filled. Stream locations are sampled from downstream to upstream to prevent potential impacts on sample integrity or representativeness that could result from entering the stream upstream of a sampling point (e.g., by suspending sediment). Samples are not collected when there is no discernible stream flow at the respective sample location.

All five stream monitoring locations were flowing during the event and were sampled for VOCs, PCBs, and TOC.

3.0 LEAK DETECTOR SAMPLING

Leak detection systems are installed between the primary and secondary liners of SCMFs 9 and 10. These systems provide additional means to aid in the detection of contaminants in the event there is a release through the primary liner from these regulated units. Liquid within the leak detectors is collected by pumping from the riser pipes connected to the leak detection systems. The riser pipes provide access to the hydraulically interconnected components of the leak detection systems for a given cell and are identified as LD-1 and LD-2 for SCMF 9, and LD-3 and LD-4 for SCMF 10 (Figure 1)

Each leak detector riser is evacuated with a dedicated electric submersible pump. The leak detectors are purged dry or until approximately 200 gallons of water have been purged, whichever occurs first. Purge water is contained and transferred to the Site's leachate collection system. Samples are collected immediately following purging unless the location purges dry. In that case, sufficient time is allowed for recovery and the sample is then collected; typically, during the same day and no more than 24 hours after purging is completed.

The leak detectors were sampled for VOCs, PCBs, and TOC during the April 2020 quarterly monitoring event.

4.0 UNDERDRAIN SAMPLING

SCMFs 3 through 10 were constructed with underdrain dewatering systems that were operated to facilitate construction of the units. The underdrains lie below the liner systems and are in contact with natural geologic materials. The underdrains are now sampled as part of the quarterly monitoring program for the facility. The design and construction details vary between each SCMF and are documented in Section 1.2 of the RCRA Facility Closure Plan. Underdrain riser locations are shown on Figure 1 herein.

Underdrains are evacuated in a manner similar to the leak detectors using dedicated electric submersible pumps. Each underdrain is purged until approximately 200 gallons of water have been evacuated. Purge water is contained and transferred to the Site's leachate collection system. Underdrain samples are collected immediately following purging.

The underdrains were sampled for VOCs, TOC, and PCBs during the April 2020 quarterly monitoring event. Underdrain U-9 is permanently inoperable and was not sampled during the event. U-9 is located beneath SCMF 4/5, within the Corrective Measures Implementation (CMI) area slurry wall (Figure 1). Underdrains U-10, U-11, and U-12 are also located beneath SCMF 4/5 and continue to be sampled on a quarterly basis.

5.0 ANALYTICAL RESULTS

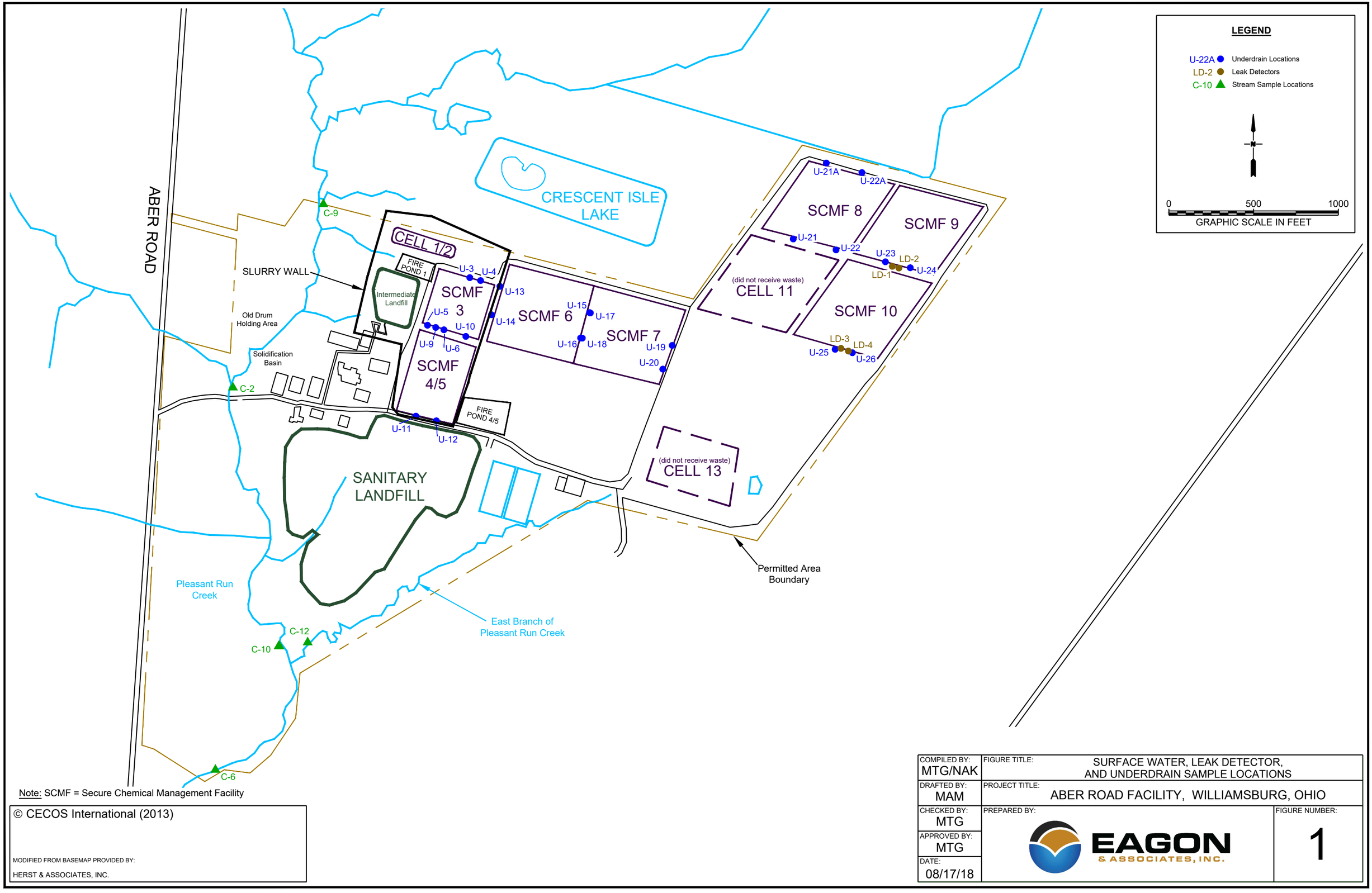
There were no detections of VOCs in samples from the leak detectors or underdrains located outside of the CMI area during the April 2020 event. In addition, there were no quantified detections of VOCs in the surface water samples.

VOC detections in the April 2020 underdrain samples are summarized in Table 1. Underdrains U-3, U-4, U-5, U-6, and U-12, which are located beneath units contained within the slurry wall, exhibited quantified VOC detections of constituents that are commonly detected at those locations. Concentrations of those VOCs observed during the event were within the range of concentrations observed during previous monitoring events.

There were no detections of PCBs in any of the surface water, leak detector or underdrain samples collected during the event, which is consistent with past events.

The analytical results from the April 2020 quarterly monitoring event, including field information logs and chain-of-custody records, are presented herein in Appendix A.

FIGURES



MODIFIED FROM BASEMAP PROVIDED BY:
HERST & ASSOCIATES, INC.

COMPILED BY: MTG/NAK	FIGURE TITLE: SURFACE WATER, LEAK DETECTOR, AND UNDERDRAIN SAMPLE LOCATIONS	
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 1
APPROVED BY: MTG		
DATE: 08/17/18		

F:\AUTOCAD\CECOS\CECOS-04-2013REV\CECOS-BASEMAP-04-2013-LEAK-DETECT-FIGURE.DWG

TABLES

TABLE 1.
VOC DETECTIONS IN UNDERDRAINS
APRIL 2020 QUARTERLY MONITORING EVENT
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Location	Detected Constituent[2]	Concentration (ug/L)
U-3[1]	1,1-Dichloroethane	31
	1,2-Dichloroethene (Total)	20
	Vinyl Chloride	1.0
U-4[1]	1,1-Dichloroethane	7.0
	1,2-Dichloroethene (Total)	30
	Vinyl Chloride	2.6
U-5[1]	1,1-Dichloroethane	8.1
	1,2-Dichloroethene (Total)	18
U-6[1]	1,1-Dichloroethane	22
	1,2-Dichloroethene (Total)	15
U-12[1]	1,2-Dichloroethene (Total)	8.1
	Vinyl Chloride	1.8

Notes:

[1] Underdrain located beneath units contained within the CMI area slurry wall

[2] Constituents reported by the laboratory as estimated concentrations ("J") below the practical quantitation limit are not shown, if applicable

2020 FIRST SEMIANNUAL STATISTICAL ANALYSIS REPORT

June 26, 2020

CECOS INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

June 26, 2020

VIA EMAIL

Mr. Tim Hull
Ohio Environmental Protection Agency
401 East Fifth Street
Dayton, Ohio 45402-2911

RE: Detection Monitoring Program
2020 First Semiannual Groundwater Quality and Statistical Analysis Results
CECOS International, Inc. - Aber Road Facility
Williamsburg, Ohio
EPA I.D. No. OHD 087 433 744

Dear Mr. Hull:

Transmitted herewith is the report: "Detection Monitoring Program, 2020 First Semiannual Groundwater Quality and Statistical Analysis Results, CECOS International, Inc. - Aber Road Facility" (Eagon & Associates, Inc.; June 25, 2020). The report includes the results of the April 2020 sampling activities and statistical analysis of those results, where applicable. The 2020 second semiannual sampling event was conducted April 6 through 9, 2020. A resampling event was performed at two wells on May 27, 2020.

CECOS is presently performing groundwater detection monitoring activities in accordance with the Resource Conservation & Recovery Act (RCRA) for six closed regulated units at the Aber Road facility: Secure Chemical Management Facility 6 (SCMF 6), SCMF 7, SCMF 8, SCMF 9, SCMF 10, and Fire Pond 4/5. Groundwater monitoring activities for the facility's Detection Monitoring Program (DMP) are performed in accordance with the facility's approved Post-Closure Plan (March 2019) and OAC Rules 3745-54-90 through 54-100, where applicable.

There was one initial statistically significant result identified during the event: dissolved barium at BTI well MP-409. The well was resampled and the resampling results did not confirm the initial results. Therefore, there were no confirmed statistically significant concentrations identified for any indicator constituent in any monitoring well during the event. BTI well MP-280 also was resampled for VOCs because of a holding time issue encountered at the laboratory.

The 2020 first semiannual dissolved metals results for the Upper Sand and 880 Sand wells displayed similar characteristics to historical concentrations detected at each well or in each zone and notable observations are discussed in the report. There were no VOC detections in the Upper Sand or 880 Sand at or above the parameter-specific PQLs during the event and there was no indication that additional evaluation of those zones is appropriate at this time.

In accordance with US EPA requirements for the facility, the April 2020 event included sampling all DMP wells for Toxic Substances Control Act parameters total organic carbon and polychlorinated biphenyls (PCBs). Those results are presented in the laboratory analytical report included in Appendix A of the attached report. No PCBs were detected in any well during the event.

As required by the Post-Closure Plan, the DMP event report is being submitted within 90 days of the April 9 completion of the 2020 first semiannual sampling event; i.e., by July 8, 2020.

Please call me at (513) 724-6114 if you have any questions regarding this submittal.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachments: *Detection Monitoring Program, 2020 First Semiannual Groundwater Quality and Statistical Analysis Results, CECOS International, Inc. - Aber Road Facility*

cc: Jae Lee, US EPA Region 5
Todd Gmitro, US EPA Region 5
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.

File: B.3

DETECTION MONITORING PROGRAM
2020 FIRST SEMIANNUAL
GROUNDWATER QUALITY AND
STATISTICAL ANALYSIS RESULTS

CECOS INTERNATIONAL, INC.
ABER ROAD FACILITY
WILLIAMSBURG, OHIO

EPA ID # OHD-087-433-744

Prepared for:

CECOS INTERNATIONAL, INC.

Prepared by:

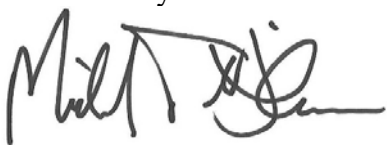
EAGON & ASSOCIATES, INC.
Worthington, Ohio

June 25, 2020

EAGON & ASSOCIATES, INC.
100 West Old Wilson Bridge Road, Suite 115
Worthington, Ohio 43085
(614) 888-5760

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Submitted by:



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Hydrogeologist
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TABLE OF CONTENTS

FIGURES

TABLES

TABLE OF CONTENTS

APPENDICES

DETECTION MONITORING PROGRAM
2020 FIRST SEMIANNUAL
GROUNDWATER QUALITY AND
STATISTICAL ANALYSIS RESULTS
CECOS INTERNATIONAL, INC. – ABER ROAD FACILITY

1.0 INTRODUCTION

This report presents the results of the 2020 first semiannual Detection Monitoring Program (DMP) groundwater sampling event performed at CECOS International Inc.'s (CECOS) Aber Road facility in Williamsburg, Ohio (Figure 1). The report has been prepared by Eagon & Associates, Inc. (Eagon) on behalf of the facility. The 2020 first semiannual DMP groundwater sampling event was completed April 6 through 9, 2020.

CECOS is presently performing groundwater detection monitoring activities in accordance with the Resource Conservation & Recovery Act (RCRA) for six closed regulated units at the Aber Road facility: Secure Chemical Management Facility 6 (SCMF 6), SCMF 7, SCMF 8, SCMF 9, SCMF 10, and Fire Pond 4/5 (Figure 1). Although the regulated units were closed under the Interim Status hazardous waste regulations, groundwater monitoring activities are performed in accordance with Ohio EPA's more comprehensive permitted status regulations; i.e., OAC Rules 3745-54-90 through 54-100. The 2020 first semiannual DMP sampling event was performed in accordance with the facility's Ohio EPA-approved Post-Closure Plan dated March 2019.

Included herein is a summary of the April 2020 field activities, analytical results, laboratory quality assurance and quality control (QA/QC) information, chain-of-custody records, field information forms, field-meter calibration records, and the statistical analysis results. The April 2020 concentration for dissolved barium at Bedrock-Till Interface (BTI) monitoring well MP-409 was initially determined to be statistically significant results. A verification sample collected in May 2020 did not confirm the initial statistically significant results. Therefore, there were no confirmed statistically significant concentrations of any constituent observed for any monitoring well during the event.

In addition to the routine sampling activities performed during the event and in response to discussions with Clermont County in January 2020 regarding naturally occurring concentrations of total dissolved solids observed in the BTI at the well, supplemental sampling for major ions was performed at monitoring well MP-279. Three sets of samples for the major ions were collected, as follows: during routine DMP semiannual sampling (sample ID: MP-279); after pulling and inspecting the dedicated pump, redeveloping the well, then sampling normally (low flow; ID: MP-279 (#2)); and sample collection after collecting MP-279 (2) using volumetric purging (MP-279 (#3)). The laboratory results and field data sheets for the supplemental samples are presented herein for reference only in Appendix A. No notable differences were identified between the three different sets of major ion results and confirm that samples from the well are representative of natural groundwater quality.

1.1 Status of the Groundwater Monitoring Program

Four hydrostratigraphic zones are monitored as part of the DMP. Included in descending order are the Upper Sand, the 880 Sand, the Channel Sand, and the Bedrock-Till Interface. Only the BTI is present in all areas (Figures 2 through 5).

The DMP groundwater monitoring network consists of 45 monitoring wells, as follows:

- **Upper Sand**: one background and eight point-of-compliance monitoring wells;
- **880 Sand:** one background and 15 point-of-compliance wells;
- **Channel Sand:** one background and two point-of-compliance wells; and
- **BTI:** one background and 16 point-of-compliance wells.

In addition, site-wide water levels are measured semiannually in piezometers completed in each of the four monitoring zones. Figures 2 through 5 show the monitoring well and piezometer locations for each monitoring horizon, respectively. Tables 1A through 1D list the monitoring wells and piezometers completed in each monitoring zone.

The indicator constituents statistically evaluated for the Upper Sand and 880 Sand zones consist of the 62 U.S. EPA SW-846 Methods 8260 and 8011 volatile organic compounds (VOCs) listed on Table 11 of the facility's March 2019 Post-Closure Plan (PCP). The statistical indicator constituents for the Channel Sand and BTI zones include the same list of VOCs, plus the dissolved RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The Upper Sand and 880 Sand wells are sampled for the RCRA metals; however, those results are for informational purposes only and are not statistically evaluated. In accordance with the statistical analysis program, all point-of-compliance wells in each of the four monitoring horizons are evaluated for their respective indicator constituents during each routine semiannual event.

In addition to the post-closure groundwater monitoring activities, the DMP monitoring wells are sampled for the facility's Toxic Substances Control Act (TSCA) parameters and those analytical results are also presented herein. The TSCA-specific parameters analyzed in addition to the DMP parameters are polychlorinated biphenyls (PCBs) and total organic carbon (TOC). TOC is naturally occurring and is regularly detected in most wells. No PCBs were detected in any sample collected during the April 2020 event.

2.0 EVENT SUMMARY

2.1 Field Activities

Groundwater sampling activities conducted during the 2020 first semiannual sampling event were performed by Eagon. Site-wide water levels were measured on April 6, 2020. Quality assurance/quality control (QA/QC) samples collected during the event included three duplicate samples, one field-blank sample, one matrix spike sample, and one matrix spike duplicate sample. The QA/QC samples were analyzed for all of the parameters included in the event. A trip blank was analyzed for VOCs.

As part of the routine event, the monitoring wells were purged using low-flow sampling protocols or were purged to dryness prior to sample collection following methods described in the Post-Closure Plan. The wells were sampled immediately following purging in low-flow wells and

were sampled when adequate recharge had occurred in wells that were purged dry. Samples were collected from wells purged dry no later than 24 hours after purging was completed.

Field measurements of depth to water, pH, temperature, specific conductance, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured and recorded at each well. Depth to water, pH, temperature, and specific conductance measurements were used to monitor stabilization during purging for the purpose of determining when adequate purging had occurred in low-flow wells prior to sample collection. Field water-quality meters were calibrated and/or checked each day prior to sampling and the results of each calibration check are recorded on the field meter calibration forms, which are included in Appendices A and B.

Sample water for dissolved metals analysis was field filtered through inline 0.45-micron filters attached directly to the pump discharge tubing at each well.

A routine well inspection was completed at the time water levels were collected during the event. An obstruction at approximately eight feet below the top of the 1-inch PVC well casing in BTI piezometer 12-5 precluded the measurement of a water level at that location. Piezometer 12-5 is located immediately adjacent to BTI monitoring well MP-404, which was accessible for water-level measurement during the event. The piezometer is non-essential to the water-level monitoring network. Options to remedy the obstruction will be evaluated prior to completing the 2020 second semiannual sampling event. Separately, several well protector lids were observed to be in need of replacement. The lids for these wells were replaced by site personnel following the April sampling event. The results of well integrity inspections performed at each monitoring well and piezometer and any corrective actions taken are presented on inspection reports on file at the Site.

The field information forms and laboratory analytical data report for the event are included in Appendix A. Water levels, purge information, sample observations, and field parameters measured at each well at the time of purging and sampling are included on the field information forms. The corresponding information for the May 2020 resampling event is included in Appendix B.

2.2 Water Levels and Groundwater Flow

Groundwater flow conditions have been characterized for the 2020 first semiannual event using the April 6, 2020 water-level elevations measured in the monitoring wells and piezometers. All water levels were measured prior to purging any well and are summarized for the Upper Sand, 880 Sand, Channel Sand, and BTI in Tables 1A through 1D, respectively.

Figure 2 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the Upper Sand at the time of the April 2020 sampling event. The Upper Sand is not present beneath the regulated units where it was excavated during construction, nor is it present in other areas of the facility located outside of its natural areal extent shown on Figure 2. Water levels and flow orientations in the Upper Sand during the event were consistent with previous observations, with groundwater flow generally toward the south in the vicinity of the regulated units.

The groundwater flow velocity in the Upper Sand at the time of the April 2020 sampling event has been calculated using the following formula:

$$\bar{v} = \frac{Ki}{n}$$

where: $\bar{v}$ = average linear flow velocity in feet per day (ft/d)

K = hydraulic conductivity (ft/d)

i = hydraulic gradient (dimensionless)

n = effective porosity (percent)

Assuming: K = 5.0 x 10^{-3} centimeters per second (cm/s), or 14 ft/d, based on the 1989 RCRA Facility Investigation (RFI); i = 1.7 x 10^{-2} in April 2020; and n = 25%; the calculated average linear groundwater flow velocity in the Upper Sand in the vicinity of the regulated units was approximately 1.0 ft/d during the event.

Figure 3 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the 880 Sand at the time of the April 2020 event. As with the Upper Sand discussed above, the 880 Sand is not present where it was excavated beneath the regulated units and has limited natural areal extent outside of the units. Water levels and flow orientations in the 880 Sand during the event were consistent with previous observations. The groundwater flow direction in the vicinity of the regulated units was generally toward the south, with slight southeastward and southwestward variations in some areas (Figure 3).

Assuming: $K = 1.0 \times 10^{-2}$ cm/s (28.3 ft/d) (RFI); $i = 1.5 \times 10^{-2}$ in April 2020; and n = 25%; the calculated average linear groundwater flow velocity in the 880 Sand in the vicinity of the regulated units was approximately 1.7 ft/d during the event.

Figure 4 shows the contoured water-level elevations and groundwater flow conditions within the Channel Sand at the time of the sampling event. Water levels and flow orientations were consistent with previous observations. The groundwater flow direction in the Channel Sand follows the discrete nature of the unit and showed an eastward component of flow in the northwestern half of the facility and a south-southeastward component of flow in the vicinity of SCMF 10 during the event.

Assuming: $K = 1.0 \times 10^{-1}$ cm/s (283 ft/d) (RFI); $i = 3.3 \times 10^{-4}$ in April 2020; and n = 25%; the calculated average linear groundwater flow velocity in the Channel Sand in the vicinity of the regulated units was approximately 0.4 ft/d during the event.

Figure 5 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the Bedrock-Till Interface (BTI). April 2020 water levels and flow orientations were generally consistent with previous observations. The groundwater flow direction in the BTI varies across the site as shown on Figure 5 and is characterized as southwesterly in the western part of the site, southerly in the central area, and southeasterly in the eastern part of the site.

Assuming: $K = 5.0 \times 10^{-5}$ cm/s (0.14 ft/d) (RFI); $i = 7.3 \times 10^{-3}$ in April 2020; and n = 20%; the calculated average linear groundwater flow velocity in the BTI in the vicinity of the regulated units was approximately 5.1×10^{-3} ft/d during the event.

The general flow directions for each of the four units discussed above are consistent with previous observations. The adequacy of well placement in the groundwater monitoring network has been evaluated using the April 2020 groundwater flow conditions and the requirements of OAC Rule 3745-54-97(A). Based upon that review, the groundwater monitoring network for the Detection Monitoring Program at the Aber Road facility continues to consist of a sufficient number of appropriately placed monitoring wells to detect statistically significant concentrations of hazardous constituents downgradient of the regulated units.

2.3 Sample Analyses and Quality Assurance

The analytical results for all inorganic parameters at each well in the Upper Sand, 880 Sand, Channel Sand, and Bedrock-Till Interface are summarized on Tables 2, 3, 4, and 5, respectively. Table 6 summarizes the field-bias (i.e., field blank and trip blank) and laboratory method blank results from the event. The analytical methods, PQLs (identified as "RL" in the laboratory reports), and method detection limits (MDLs) are shown on the laboratory analytical report included in Appendix A. All laboratory analyses of groundwater samples were performed by Eurofins TestAmerica Laboratories (ETA) of Amherst, New York. All field analyses were performed by Eagon personnel. The field and laboratory analytical results for April 2020 will be entered into the facility's 2020 annual groundwater reporting electronic database that will be submitted to Ohio EPA by March 1, 2021.

The method 8260 VOC analyses for well MP-280 was analyzed out of holding time. The 8260 vials for this well are typically filled without preservative to minimize foaming. As a result, the holding time for the 8260 analyses are reduced from 14 days to 7 days. The well was resampled in May 2020 and analysis of the sample was performed within the 7-day holding time that met the QA/QC criteria. The 8260 results from both the April and May 2020 sampling events are presented

in Appendices A and B of this report, respectively. No other QA/QC issues that required corrective action were observed during the event.

Duplicate samples were collected from monitoring wells MP-228AR, MP-274A, and MP-232A during the April 2020 event. The duplicate results are in close agreement with their associated monitoring well sample results with the exception of barium at MP-232A. Relative percent differences (RPD) for constituents detected in all of the original and duplicate samples are shown next to their respective original well sample results on Table 3 and were below an RPD of 10 for all analytes, with the exception of the barium result comparison between MP-232A and Duplicate-DMP #3 (45.5).

A field blank sample (Field Blank – DMP) also was collected for QA/QC purposes and was prepared using laboratory supplied, reagent-grade deionized water. The field blank was analyzed for all parameters included in the monitoring event. There were no quantified detections of any constituent analyzed in the field blank. A trip blank prepared by the laboratory was analyzed for VOCs and there were no detections.

Laboratory QA/QC was evaluated internally by laboratory personnel and a summary narrative of that evaluation is included in Appendix A. No QA/QC issues noted by the laboratory required corrective action, with the exception of the previously discussed method 8260 analyses at well MP-280, and all results for the event are considered representative.

3.0 STATISTICAL ANALYSIS

Statistical analysis of the April 2020 semiannual DMP monitoring results was completed in accordance with the statistical program detailed in Section 11 (Groundwater Statistical Analysis Plan) of the Post-Closure Plan (March 2019). The April 2020 results for the eight dissolved RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were statistically evaluated for the two point-of-compliance (POC) Channel Sand monitoring wells (MP-281C and MP-406C) and the 16 POC BTI monitoring wells (MP-233R, MP-234R, MP-235R, MP-237, MP-238R, MP-241R, MP-244R, MP-250, MP-274, MP-279, MP-280 and MP-281, MP-404,

MP-407, MP-408, and MP-409). In addition, statistical analysis of the results for the 62 indicator VOCs has been performed for all downgradient monitoring wells in all four monitoring horizons.

Statistical analysis was performed via the comparison of the April 2020 results to intrawell prediction limits calculated for the dissolved indicator metals using the *Sanitas*™ statistical software package, as presented in the March 2019 Post-Closure Plan. The VOC results were compared to their respective PQLs.

3.1 Background Data

The intrawell statistical methods used to evaluate the dissolved metals results at the Aber Road facility involve comparisons between monitoring data collected during a background period to future semiannual sampling results from the same well to determine if the results are statistically significant. VOC results are compared to their respective PQLs. Current summary background statistics computed for each downgradient well, for each RCRA metal, are presented in Appendix C.

3.2 Statistical Analysis of April 2020 Dissolved Metals Results

The results of the statistical analyses for the dissolved metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were completed for the Channel Sand and BTI zones and are presented in Appendix C. The April 2020 result of 0.13 mg/L for dissolved barium at BTI well MP-409 exceeded its intrawell statistical limit of 0.12 mg/L. MP-409 was resampled for dissolved barium on May 27, 2020 with a result of 0.12 mg/L, which did not confirm the April exceedance; therefore, there were no confirmed statistically significant metals results identified during the event.

As with past events, arsenic and barium were detected at most wells. Cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above their PQLs at any Channel Sand or BTI monitoring well during the event. Arsenic and barium are naturally occurring in all saturated intervals monitored at the site.

3.3 Statistical Analysis of VOCs

In accordance with the statistical analysis plan, a statistically significant result for any one of the 62 VOCs on the DMP indicator parameter list is defined as a confirmed detection at or above the constituent's PQL at the point-of-compliance. Thus, if a VOC is detected at or above its PQL in a sample collected during a routine sampling event, and a resample and reanalysis is conducted and the VOC also is detected at or above its PQL in the resample, then the VOC result reported during the routine event is considered statistically significant.

Summaries of comparisons of the VOC results to their respective PQLs at the downgradient monitoring wells are presented in Tables 2 through 5. An "ND" result on the tables indicates that all 62 VOCs analyzed were not detected at or above their respective PQLs for that well. There were no VOCs detected at or above their respective PQLs at any monitoring well during the April 2020 event and May resampling event for well MP-280 (Appendices A and B). Therefore, no statistical exceedances occurred for VOCs.

4.0 EVALUATION OF DISSOLVED METALS RESULTS FROM THE UPPER SAND AND 880 SAND

Semiannual dissolved metals results from the Upper Sand and 880 Sand monitoring networks are not statistically evaluated; however, those results are reviewed qualitatively for reference purposes. For the April 2020 event, time-series plots were generated for the eight dissolved metals routinely sampled in the Upper Sand and 880 Sand zones and are presented in Appendix D (Upper Sand) and Appendix E (880 Sand). Included are plots for arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Dissolved arsenic and chromium results are available for wells included in the monitoring program since as far back as 1997, whereas dissolved barium, cadmium, lead, mercury, selenium, and silver have been routinely analyzed since October 2012.

As shown on the time-series plots, the April 2020 metals results were generally within the range of previously observed concentrations in both the Upper Sand and 880 Sand. None of the

results were substantially divergent from historical results. Arsenic is typically detected in most wells and barium was detected in all Upper Sand and 880 Sand wells during the event. A low-level detection of chromium (0.012 mg/L) was reported for 880 Sand well MP-211BR, where detections have occurred in the past, and was within the range of historical values.

No detections of any other metals at or above their respective PQLs in the 880 Sand or Upper Sand monitoring wells were identified during the event. Based on the review of the April 2020 sampling results, no additional evaluation of the Upper Sand and 880 Sand monitoring zones is warranted at this time.

5.0 SUMMARY

Analysis of the 2020 first semiannual DMP groundwater quality sampling results collected in April 2020 identified an initial statistically significant result for dissolved barium at BTI well MP-409. A resample collected in May 2020 did not confirm the original results; therefore, no statistically significant increases were declared for the wells. For the event, no confirmed statistically significant concentrations for the indicator constituents were present at any well downgradient of the regulated units at the Aber Road facility.

April 2020 sampling results for TOC and PCBs for all 45 DMP monitoring wells are presented herein in Appendix A. TOC and PCBs are analyzed during routine DMP sampling events in accordance with the facility's TSCA monitoring requirements. No PCBs were detected in any DMP monitoring well during the event.

The next routine semiannual DMP groundwater sampling event is tentatively scheduled for October 2020.

TABLES

TABLE 2.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
UPPER SAND ZONE
APRIL 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-206AR 4/8/2020	MP-231AR 4/8/2020	MP-235CR 4/7/2020	MP-244ARR 4/9/2020	MP-401A 4/7/2020	MP-402A 4/7/2020	MP-403A 4/8/2020	MP-404A 4/8/2020	MP-405A 4/8/2020
Arsenic, Dissolved	mg/L	<0.001	**0.0017**	<0.001	**0.0074**	<0.001	**0.0041**	<0.001	<0.001	<0.001
Barium, Dissolved	mg/L	**0.0079**	**0.0048**	**0.010**	**0.058**	**0.039**	**0.035**	**0.0093**	**0.054**	**0.012**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	**0.0056**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
APRIL 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-210AR	MP-211BR	MP-213A	MP-214BR	MP-228AR	Duplicate-DMP #1	RPD	MP-230A
		4/7/2020	4/7/2020	4/8/2020	4/8/2020	4/8/2020			4/8/2020
Arsenic, Dissolved	mg/L	**0.0016**	<0.001	<0.001	**0.0021**	**0.0040**	**0.0041**	2.5%	**0.0110**
Barium, Dissolved	mg/L	**0.055**	**0.041**	**0.032**	**0.0091**	**0.028**	**0.0290**	3.5%	**0.030**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NC	<0.001
Chromium, Dissolved	mg/L	<0.005	**0.012**	<0.005	<0.005	<0.005	<0.005	NC	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NC	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NC	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	NC	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	NC	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND	NC	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
APRIL 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-232A	Duplicate-DMP #3	RPD	MP-233AR	MP-234AR	MP-235BR	MP-250A	MP-251A
		4/8/2020			4/7/2020	4/7/2020	4/7/2020	4/9/2020	4/8/2020
Arsenic, Dissolved	mg/L	**0.0076**	**0.0072**	5.4%	**0.0052**	**0.0053**	**0.0032**	**0.0062**	**0.0017**
Barium, Dissolved	mg/L	**0.027**	**0.0170**	45.5%	**0.022**	**0.0095**	**0.012**	**0.0350**	**0.110**
Cadmium, Dissolved	mg/L	<0.001	<0.001	NC	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	NC	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	NC	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	NC	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	NC	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	NC	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	NC	ND	ND	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
APRIL 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-274A	Duplicate-DMP #2	RPD	MP-277A	MP-280A	MP-401B
		4/7/2020			4/8/2020	4/8/2020	4/7/2020
Arsenic, Dissolved	mg/L	**0.0580**	**0.0570**	1.7%	**0.0077**	**0.0210**	**0.0047**
Barium, Dissolved	mg/L	**0.027**	**0.0260**	3.8%	**0.033**	**0.030**	**0.039**
Cadmium, Dissolved	mg/L	<0.001	<0.001	NC	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	NC	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	NC	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	NC	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	NC	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	NC	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	NC	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 4.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
CHANNEL SAND ZONE
APRIL 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-281C 4/8/2020	MP-286C 4/8/2020	MP-406C 4/8/2020
Arsenic, Dissolved	mg/L	**0.0046**	**0.0034**	**0.0035**
Barium, Dissolved	mg/L	**0.056**	**0.130**	**0.140**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
APRIL 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-228R 4/6/2020	MP-233R 4/7/2020	MP-234R 4/7/2020	MP-235R 4/7/2020	MP-237 4/8/2020	MP-238R 4/8/2020	MP-241R 4/7/2020	MP-244R 4/8/2020	MP-250 4/9/2020
Arsenic, Dissolved	mg/L	**0.0025**	**0.0022**	<0.001	<0.001	<0.001	<0.001	**0.0012**	<0.001	**0.0014**
Barium, Dissolved	mg/L	**0.079**	**0.420**	**0.049**	**0.041**	**0.032**	**0.047**	**0.043**	**0.020**	**0.049**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.
NC - not calculable

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
APRIL 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-274 4/8/2020	MP-279 4/7/2020	MP-280 4/8/2020	MP-280 5/27/2020	MP-281 4/8/2020	MP-404 4/8/2020	MP-407 4/7/2020	MP-408 4/8/2020	MP-409 4/8/2020	MP-409 6/2/2020
Arsenic, Dissolved	mg/L	<0.001	<0.001	**0.0240**	--	<0.001	**0.0014**	<0.001	**0.0860**	**0.0019**	--
Barium, Dissolved	mg/L	**0.400**	**1.100**	**0.320**	--	**0.280**	**0.360**	**0.740**	**0.560**	**0.13**	**0.12**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	--
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	--	<0.005	<0.005	<0.005	<0.005	<0.005	--
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	--	<0.005	<0.005	<0.005	<0.005	<0.005	--
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	--	<0.015	<0.015	<0.015	<0.015	<0.015	--
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	--	<0.003	<0.003	<0.003	<0.003	<0.003	--
VOCs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	--

ND - no detections at or above PQL.
NC - not calculable

TABLE 6.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
QA/QC SAMPLES
APRIL 2020
CECOS - ABER ROAD FACILITY

Constituent	Field Blank DMP 4/8/2020	Method Blank	Trip Blank
Arsenic, Dissolved	<0.001	<0.001 (3)	--
Barium, Dissolved	<0.002	<0.002 (3)	--
Cadmium, Dissolved	<0.001	<0.001 (3)	--
Chromium, Dissolved	<0.005	<0.005 (3)	--
Lead, Dissolved	<0.005	<0.005 (3)	--
Mercury, Dissolved	<0.0002	<0.0002 (3)	--
Selenium, Dissolved	<0.015	<0.015 (3)	--
Silver, Dissolved	<0.003	<0.003 (5)	--
VOCs	ND	ND (8)	ND

ND - no detections at or above PQL.

-- Not Analyzed

( ) Number of Method Blank batches run by laboratory for parameter.

See Laboratory Report QA/QC section for separate analyses.

THIRD QUARTER 2020 MONITORING REPORT

August 19, 2020

CECOS
INTERNATIONAL

5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

August 19, 2020

VIA EMAIL
Mr. Jae Lee
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: Quarterly Monitoring Report
July 2020 Sampling Event
CECOS International, Inc.
Aber Road Facility, Williamsburg, Ohio
EPA I.D. # OHD-087-433-744

Dear Mr. Lee:

Please find the attached Quarterly Monitoring Report for the July 2020 sampling event completed at CECOS International, Inc.'s (CECOS) Aber Road facility. The report was prepared by Eagon & Associates, Inc. on behalf of CECOS and contains a discussion of the July 2020 sampling results for Toxic Substances Control Act (TSCA) parameters collected from the surface water points, leak detectors, and underdrains.

Hardcopies of any items in the report are available upon request. Please contact me at (513) 724-6114 if you have any questions regarding this correspondence.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachment

cc: Todd Gmitro, US EPA Region 5
Tim Hull, Ohio EPA SWDO
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.
File: B.1

QUARTERLY MONITORING REPORT

JULY 2020 SAMPLING EVENT

Prepared for:

CECOS International, Inc.
Aber Road Facility
Williamsburg, Ohio

EPA I.D. OHD 087 433 744

Prepared by:

Eagon & Associates, Inc.
Worthington, Ohio

August 2020

Eagon & Associates, Inc.
100 West Old Wilson Bridge Road, Suite 115
Worthington, Ohio 43085
(614) 888-5760

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

On behalf of the CECOS International, Inc. Aber Road Facility, Eagon & Associates, Inc. (Eagon) has prepared this Quarterly Monitoring Report for the July 2020 surface water, leak detector, and underdrain sampling results. Samples for the Site's US EPA Toxic Substances Control Act (TSCA) parameters were collected by Eagon and laboratory analyses were performed by Eurofins TestAmerica, Inc. of Amherst, New York. The July 2020 quarterly monitoring sampling event was performed July 13, 14, and 15, 2020. The event included sampling of the leak detectors, underdrains, and surface water monitoring locations at the Aber Road Facility.

TSCA monitoring requirements were established with US EPA's July 31, 1981 approval to dispose polychlorinated biphenyls (PCBs) in planned Secure Chemical Management Facilities (SCMFs) 6 through 17 (SCMFs 11 through 17 were never constructed) and, after negotiated revisions, were originally outlined in the March 13, 1984 document entitled "TSCA Monitoring Program." The original TSCA monitoring approach included monitoring of the leak detectors, underdrains and surface water (LD/UD/SW), as well as a site-wide TSCA-specific groundwater monitoring component that focused on both the pre-RCRA units and the RCRA regulated units at the Site. The LD/UD/SW component continues within that framework on a quarterly basis and the results for the most recent monitoring event are presented in this report.

With the later development of tailored, regulatory-program specific groundwater monitoring programs for the pre-RCRA and RCRA areas, the site-wide TSCA groundwater monitoring component was transitioned to and captured within those programs. The RCRA Detection Monitoring Program (DMP) for groundwater was originally proposed in 1989, was fully implemented by 1994, and applies to the RCRA regulated units located outside of the Corrective Measures Implementation (CMI) slurry wall. The current groundwater DMP is specified in the Detection Monitoring Plan which is part of the March 2017 RCRA Post-Closure Plan approved by Ohio EPA. The CMI post-construction groundwater monitoring program applies to the pre-RCRA areas and SCMFs 3 and 4/5 and was implemented in 1998 according to the monitoring approach outlined in the August 1996 Quality Assurance Project Plan and the March 1998 and November 1998 revisions to the CMI O&M Manual. The DMP is managed by Ohio EPA, whereas

the facility's CMI program is managed by US EPA. The DMP and CMI groundwater monitoring programs fulfill the facility's TSCA groundwater monitoring obligations via the sampling and analysis for PCBs and total organic carbon (TOC), in addition to volatile organic compounds (VOCs) specific to the DMP and CMI programs. All groundwater monitoring results collected semiannually as part of the DMP and CMI programs are reported separately to Ohio EPA and US EPA's RCRA division and are not presented herein.

2.0 SURFACE WATER SAMPLING

Pleasant Run Creek is west of the Site and generally flows south, then bears southeastward downstream toward its confluence with the East Fork of the Little Miami River located approximately two miles from the Aber Road facility. The East Branch of Pleasant Run Creek is south and east of the Site and flows southwest toward its confluence with Pleasant Run Creek at the southwestern corner of the Site (Figure 1). Surface water samples are collected on a quarterly basis at five designated sampling stations: C-2, C-6, C-9, C-10, and C-12. Locations C-2, C-6, C-9, and C-10 are located on Pleasant Run Creek (Figure 1). Location C-12 is on the East Branch of Pleasant Run Creek slightly upstream of the confluence. C-9 is the upstream/background location. C-6 is downstream of the confluence and the most downstream surface-water monitoring point.

To collect the surface water samples, the samplers position themselves downstream from each stream sample station in as near to the middle of the stream channel as possible. Pre-cleaned sample containers are then partially inverted and slowly submerged into the water. The container is then slowly rotated upright until filled and is then removed from the stream and capped. This procedure is continued until all containers are filled. Stream locations are sampled from downstream to upstream to prevent potential impacts on sample integrity or representativeness that could result from entering the stream upstream of a sampling point (e.g., by suspending sediment). Samples are not collected when there is no discernible stream flow at the respective sample location.

Four of the five stream monitoring locations were flowing during the event and were sampled for VOCs, PCBs, and TOC. There was no discernible flow at monitoring location C-12 during the event.

3.0 LEAK DETECTOR SAMPLING

Leak detection systems are installed between the primary and secondary liners of SCMFs 9 and 10. These systems provide additional means to aid in the detection of contaminants in the event there is a release through the primary liner from these regulated units. Liquid within the leak detectors is collected by pumping from the riser pipes connected to the leak detection systems. The riser pipes provide access to the hydraulically interconnected components of the leak detection systems for a given cell and are identified as LD-1 and LD-2 for SCMF 9, and LD-3 and LD-4 for SCMF 10 (Figure 1)

Each leak detector riser is evacuated with a dedicated electric submersible pump. The leak detectors are purged dry or until approximately 200 gallons of water have been purged, whichever occurs first. Purge water is contained and transferred to the Site's leachate collection system. Samples are collected immediately following purging unless the location purges dry. In that case, sufficient time is allowed for recovery and the sample is then collected; typically, during the same day and no more than 24 hours after purging is completed.

The leak detectors were sampled for VOCs, PCBs, and TOC during the July 2020 quarterly monitoring event.

4.0 UNDERDRAIN SAMPLING

SCMFs 3 through 10 were constructed with underdrain dewatering systems that were operated to facilitate construction of the units. The underdrains lie below the liner systems and are in contact with natural geologic materials. The underdrains are now sampled as part of the quarterly monitoring program for the facility. The design and construction details vary between

each SCMF and are documented in Section 1.2 of the RCRA Facility Closure Plan. Underdrain riser locations are shown on Figure 1 herein.

Underdrains are evacuated in a manner similar to the leak detectors using dedicated electric submersible pumps. Each underdrain is purged until approximately 200 gallons of water have been evacuated. Purge water is contained and transferred to the Site's leachate collection system. Underdrain samples are collected immediately following purging.

The underdrains were sampled for VOCs, TOC, and PCBs during the July 2020 quarterly monitoring event. Underdrain U-9 is permanently inoperable and was not sampled during the event. U-9 is located beneath SCMF 4/5, within the Corrective Measures Implementation (CMI) area slurry wall (Figure 1). Underdrains U-10, U-11, and U-12 are also located beneath SCMF 4/5 and continue to be sampled on a quarterly basis.

5.0 ANALYTICAL RESULTS

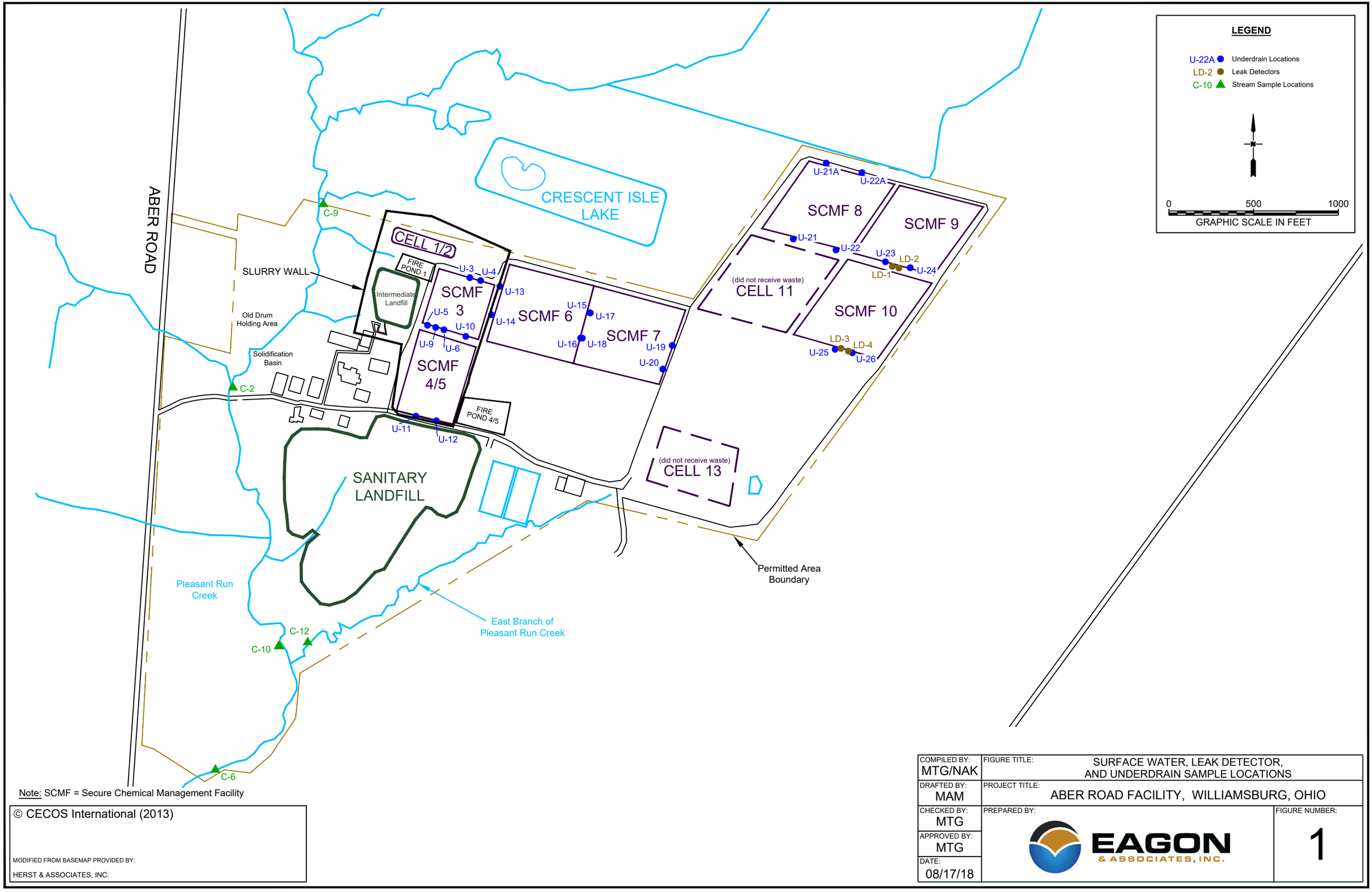
There were no quantified detections of VOCs in samples from the leak detectors or underdrains located outside of the CMI area during the July 2020 event. In addition, there were no detections of VOCs in the surface water samples.

VOC detections in the July 2020 underdrain samples are summarized in Table 1. Underdrains U-3, U-4, U-5, U-6, and U-12, which are located beneath units contained within the slurry wall, exhibited quantified VOC detections of constituents that are commonly detected at those locations. Concentrations of those VOCs observed during the event were within the range of concentrations observed during previous monitoring events.

There were no detections of PCBs in any of the surface water, leak detector or underdrain samples collected during the event, which is consistent with past events.

The analytical results from the July 2020 quarterly monitoring event, including field information logs and chain-of-custody records, are presented herein in Appendix A.

FIGURES



MODIFIED FROM BASEMAP PROVIDED BY:
HERST & ASSOCIATES, INC.

COMPILED BY: MTG/NAK	FIGURE TITLE: SURFACE WATER, LEAK DETECTOR, AND UNDERDRAIN SAMPLE LOCATIONS	
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 1
APPROVED BY: MTG		
DATE: 08/17/18		

F:\AUTOCAD\CECOS\CECOS-04-2013REV\CECOS-BASEMAP-04-2013-LEAK-DETECT-FIGURE.DWG

TABLES

TABLE 1.
VOC DETECTIONS IN UNDERDRAINS
JULY 2020 QUARTERLY MONITORING EVENT
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Location	Detected Constituent[2]	Concentration (ug/L)
U-3[1]	1,1-Dichloroethane	26
	1,2-Dichloroethene (Total)	20
	Vinyl Chloride	1.5
Dup TSCA #3 (U-3)[1]	1,1-Dichloroethane	23
	1,2-Dichloroethene (Total)	18
	Vinyl Chloride	1.5
U-4[1]	1,1-Dichloroethane	6.6
	1,2-Dichloroethene (Total)	28
	Vinyl Chloride	3.5
U-5[1]	1,1-Dichloroethane	9.9
	1,2-Dichloroethene (Total)	20
U-6[1]	1,1-Dichloroethane	22
	1,2-Dichloroethene (Total)	13
U-12[1]	1,2-Dichloroethene (Total)	8.2
	Vinyl Chloride	1.4
Dup TSCA #2 (U-12)[1]	1,2-Dichloroethene (Total)	8.7
	Vinyl Chloride	1.6

Notes:

[1] Underdrain located beneath units contained within the CMI area slurry wall

[2] Constituents reported by the laboratory as estimated concentrations ("J") below the practical quantitation limit are not shown, if applicable

FOURTH QUARTER 2020 MONITORING REPORT
November 11, 2020

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

November 11, 2020

VIA EMAIL
Mr. Jae Lee
U.S. Environmental Protection Agency
77 West Jackson Blvd.
Chicago, IL 60604

RE: Quarterly Monitoring Report
October 2020 Sampling Event
CECOS International, Inc.
Aber Road Facility, Williamsburg, Ohio
EPA I.D. # OHD-087-433-744

Dear Mr. Lee:

Please find the attached Quarterly Monitoring Report for the October 2020 sampling event completed at CECOS International, Inc.'s (CECOS) Aber Road facility. The report was prepared by Eagon & Associates, Inc. on behalf of CECOS and contains a discussion of the October 2020 sampling results for Toxic Substances Control Act (TSCA) parameters collected from the leak detectors and underdrains. Please note that, due to unusually dry seasonal conditions, no discernible flow was observed at any of the five surface water sampling locations during the event; therefore, in accordance with the Sampling and Analysis Plan, no surface water samples were collected.

Hardcopies of any items in the report are available upon request. Please contact me at (513) 724-6114 if you have any questions regarding this correspondence.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachment

cc: Todd Gmitro, US EPA Region 5
Tim Hull, Ohio EPA SWDO
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.
File: B.1

QUARTERLY MONITORING REPORT

OCTOBER 2020 SAMPLING EVENT

Prepared for:

CECOS International, Inc.
Aber Road Facility
Williamsburg, Ohio

EPA I.D. OHD 087 433 744

Prepared by:

Eagon & Associates, Inc.
Worthington, Ohio

November 2020

Eagon & Associates, Inc.
100 West Old Wilson Bridge Road, Suite 115
Worthington, Ohio 43085
(614) 888-5760

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

On behalf of the CECOS International, Inc. Aber Road Facility, Eagon & Associates, Inc. (Eagon) has prepared this Quarterly Monitoring Report for the October 2020 surface water, leak detector, and underdrain sampling results. Samples for the Site's US EPA Toxic Substances Control Act (TSCA) parameters were collected by Eagon and laboratory analyses were performed by Eurofins TestAmerica, Inc. of Amherst, New York. The October 2020 quarterly monitoring sampling event was performed October 5, 6, and 7, 2020. The event included sampling of the leak detectors and underdrains. No surface water sampling points displayed discernible flow during the event; therefore, in accordance with Section 7 of the Sampling and Analysis Plan in Attachment B of the facility's Quality Assurance Project Plan, no surface water samples were collected.

TSCA monitoring requirements were established with US EPA's July 31, 1981 approval to dispose polychlorinated biphenyls (PCBs) in planned Secure Chemical Management Facilities (SCMFs) 6 through 17 (SCMFs 11 through 17 were never constructed) and, after negotiated revisions, were originally outlined in the March 13, 1984 document entitled "TSCA Monitoring Program." The original TSCA monitoring approach included monitoring of the leak detectors, underdrains and surface water (LD/UD/SW), as well as a site-wide TSCA-specific groundwater monitoring component that focused on both the pre-RCRA units and the RCRA regulated units at the Site. The LD/UD/SW component continues within that framework on a quarterly basis and the results for the most recent monitoring event are presented in this report.

With the later development of tailored, regulatory-program specific groundwater monitoring programs for the pre-RCRA and RCRA areas, the site-wide TSCA groundwater monitoring component was transitioned to and captured within those programs. The RCRA Detection Monitoring Program (DMP) for groundwater was originally proposed in 1989, was fully implemented by 1994, and applies to the RCRA regulated units located outside of the Corrective Measures Implementation (CMI) slurry wall. The current groundwater DMP is specified in the Detection Monitoring Plan which is part of the March 2017 RCRA Post-Closure Plan approved by Ohio EPA. The CMI post-construction groundwater monitoring program applies to the pre-

RCRA areas and SCMFs 3 and 4/5 and was implemented in 1998 according to the monitoring approach outlined in the August 1996 Quality Assurance Project Plan and the March 1998 and November 1998 revisions to the CMI O&M Manual. The DMP is managed by Ohio EPA, whereas the facility's CMI program is managed by US EPA. The DMP and CMI groundwater monitoring programs fulfill the facility's TSCA groundwater monitoring obligations via the sampling and analysis for PCBs and total organic carbon (TOC), in addition to volatile organic compounds (VOCs) specific to the DMP and CMI programs. All groundwater monitoring results collected semiannually as part of the DMP and CMI programs are reported separately to Ohio EPA and US EPA's RCRA division and are not presented herein.

2.0 SURFACE WATER SAMPLING

Pleasant Run Creek is west of the Site and generally flows south, then bears southeastward downstream toward its confluence with the East Fork of the Little Miami River located approximately two miles from the Aber Road facility. The East Branch of Pleasant Run Creek is south and east of the Site and flows southwest toward its confluence with Pleasant Run Creek at the southwestern corner of the Site (Figure 1). Surface water samples are collected on a quarterly basis at five designated sampling stations: C-2, C-6, C-9, C-10, and C-12. Locations C-2, C-6, C-9, and C-10 are located on Pleasant Run Creek (Figure 1). Location C-12 is on the East Branch of Pleasant Run Creek slightly upstream of the confluence. C-9 is the upstream/background location. C-6 is downstream of the confluence and the most downstream surface-water monitoring point.

To collect the surface water samples, the samplers position themselves downstream from each stream sample station in as near to the middle of the stream channel as possible. Pre-cleaned sample containers are then partially inverted and slowly submerged into the water. The container is then slowly rotated upright until filled and is then removed from the stream and capped. This procedure is continued until all containers are filled. Stream locations are sampled from downstream to upstream to prevent potential impacts on sample integrity or representativeness that could result from entering the stream upstream of a sampling point (e.g., by suspending sediment).

As discussed above, samples are not collected when there is no discernible stream flow at the respective sample location.

There was no discernible flow at any of the stream monitoring locations during the October 2020 event; therefore, no stream samples were collected. While it is not unusual for individual locations to exhibit no-flow during dry periods, this is the first time in 33 events completed by Eagon since 2012 that no flow was observed at all five surface water locations.

3.0 LEAK DETECTOR SAMPLING

Leak detection systems are installed between the primary and secondary liners of SCMFs 9 and 10. These systems provide additional means to aid in the detection of contaminants in the event there is a release through the primary liner from these regulated units. Liquid within the leak detectors is collected by pumping from the riser pipes connected to the leak detection systems. The riser pipes provide access to the hydraulically interconnected components of the leak detection systems for a given cell and are identified as LD-1 and LD-2 for SCMF 9, and LD-3 and LD-4 for SCMF 10 (Figure 1)

Each leak detector riser is evacuated with a dedicated electric submersible pump. The leak detectors are purged dry or until approximately 200 gallons of water have been purged, whichever occurs first. Purge water is contained and transferred to the Site's leachate collection system. Samples are collected immediately following purging unless the location purges dry. In that case, sufficient time is allowed for recovery and the sample is then collected; typically, during the same day and no more than 24 hours after purging is completed.

The leak detectors were sampled for VOCs, PCBs, and TOC during the October 2020 quarterly monitoring event.

4.0 UNDERDRAIN SAMPLING

SCMFs 3 through 10 were constructed with underdrain dewatering systems that were operated to facilitate construction of the units. The underdrains lie below the liner systems and are in contact with natural geologic materials. The underdrains are now sampled as part of the quarterly monitoring program for the facility. The design and construction details vary between each SCMF and are documented in Section 1.2 of the RCRA Facility Closure Plan. Underdrain riser locations are shown on Figure 1 herein.

Underdrains are evacuated in a manner similar to the leak detectors using dedicated electric submersible pumps. Each underdrain is purged until approximately 200 gallons of water have been evacuated. Purge water is contained and transferred to the Site's leachate collection system. Underdrain samples are collected immediately following purging.

The underdrains were sampled for VOCs, TOC, and PCBs during the October 2020 quarterly monitoring event. Underdrain U-9 is permanently inoperable and was not sampled during the event. U-9 is located beneath SCMF 4/5, within the Corrective Measures Implementation (CMI) area slurry wall (Figure 1). Underdrains U-10, U-11, and U-12 are also located beneath SCMF 4/5 and continue to be sampled on a quarterly basis.

5.0 ANALYTICAL RESULTS

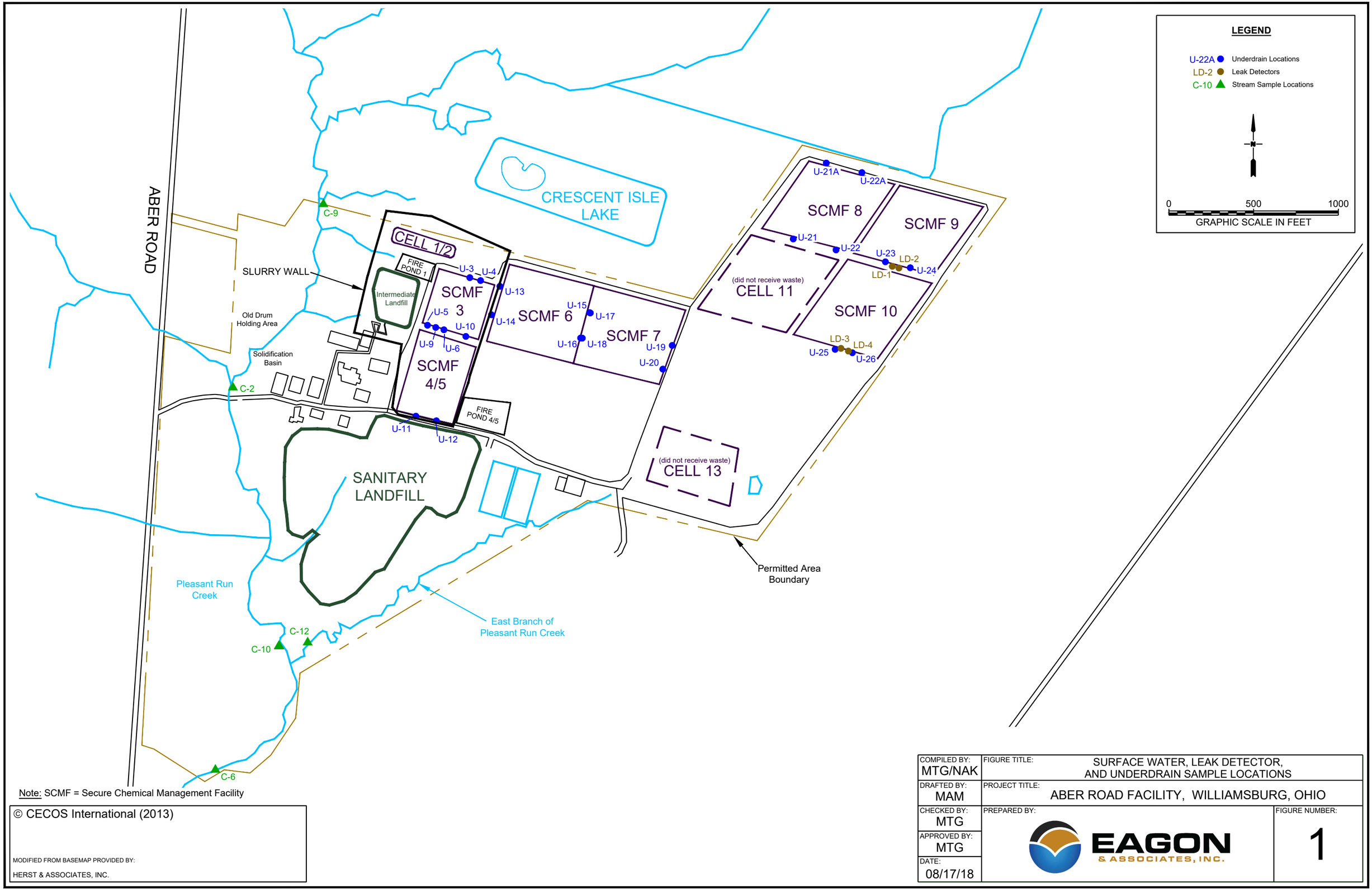
There were no quantified detections of VOCs in samples from the leak detectors or underdrains located outside of the CMI area during the October 2020 event. In addition, there were no detections of VOCs in the surface water samples.

VOC detections in the October 2020 underdrain samples are summarized in Table 1. Underdrains U-3, U-4, U-5, U-6, and U-12, which are located beneath units contained within the slurry wall, exhibited quantified VOC detections of constituents that are commonly detected at those locations. Concentrations of those VOCs observed during the event were within the range of concentrations observed during previous monitoring events.

There were no detections of PCBs in any of the leak detector or underdrain samples collected during the event, which is consistent with past events.

The analytical results from the October 2020 quarterly monitoring event, including field information logs and chain-of-custody records, are presented herein in Appendix A.

FIGURES



MODIFIED FROM BASEMAP PROVIDED BY:
HERST & ASSOCIATES, INC.

COMPILED BY: MTG/NAK	FIGURE TITLE: SURFACE WATER, LEAK DETECTOR, AND UNDERDRAIN SAMPLE LOCATIONS	
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 1
APPROVED BY: MTG		
DATE: 08/17/18		

F:\AUTOCAD\CECOS\CECOS-04-2013REV\CECOS-BASEMAP-04-2013-LEAK-DETECT-FIGURE.DWG

TABLES

TABLE 1.
VOC DETECTIONS IN UNDERDRAINS
OCTOBER 2020 QUARTERLY MONITORING EVENT
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Location	Detected Constituent[2]	Concentration (ug/L)
U-3[1]	1,1-Dichloroethane	20
	1,2-Dichloroethene (Total)	22
	Vinyl Chloride	1.7
U-4[1]	1,1-Dichloroethane	6.1
	1,2-Dichloroethene (Total)	26
	Vinyl Chloride	3.5
Dup TSCA #3 (U-4)[1]	1,1-Dichloroethane	6.1
	1,2-Dichloroethene (Total)	26
	Vinyl Chloride	3.6
U-5[1]	1,1-Dichloroethane	7.4
	1,2-Dichloroethene (Total)	15
U-6[1]	1,1-Dichloroethane	19
	1,2-Dichloroethene (Total)	12
U-12[1]	1,2-Dichloroethene (Total)	9.8
	Vinyl Chloride	1.0

Notes:

[1] Underdrain located beneath units contained within the CMI area slurry wall

[2] Constituents reported by the laboratory as estimated concentrations ("J") below the practical quantitation limit are not shown, if applicable

2020 SECOND SEMIANNUAL STATISTICAL ANALYSIS REPORT

November 24, 2020

CECOS
INTERNATIONAL
5092 Aber Road
Williamsburg, Ohio 45176
513/724-6114

November 24, 2020

VIA EMAIL

Mr. Tim Hull
Ohio Environmental Protection Agency
401 East Fifth Street
Dayton, Ohio 45402-2911

RE: Detection Monitoring Program
2020 Second Semiannual Groundwater Quality and Statistical Analysis Results
CECOS International, Inc. - Aber Road Facility
Williamsburg, Ohio
EPA I.D. No. OHD 087 433 744

Dear Mr. Hull:

Transmitted herewith is the report: "Detection Monitoring Program, 2020 Second Semiannual Groundwater Quality and Statistical Analysis Results, CECOS International, Inc. - Aber Road Facility" (Eagon & Associates, Inc.; November 19, 2020). The report includes the results of the October 2020 sampling activities and statistical analysis of those results, where applicable. The 2020 second semiannual sampling event was conducted October 5-7, 2020.

CECOS is presently performing groundwater detection monitoring activities in accordance with the Resource Conservation & Recovery Act (RCRA) for six closed regulated units at the Aber Road facility: Secure Chemical Management Facility 6 (SCMF 6), SCMF 7, SCMF 8, SCMF 9, SCMF 10, and Fire Pond 4/5. Groundwater monitoring activities for the facility's Detection Monitoring Program (DMP) are performed in accordance with the facility's approved Post-Closure Plan (March 2019) and OAC Rules 3745-54-90 through 54-100, where applicable.

There were no statistically significant results identified during the event. The 2020 second semiannual dissolved metals results for the Upper Sand and 880 Sand wells displayed similar characteristics to historical concentrations detected at each well or in each zone and notable observations are discussed in the report. There were no VOC detections in the Upper Sand or 880 Sand at or above the parameter-specific PQLs during the event and there was no indication that additional evaluation of those zones is appropriate at this time.

In accordance with US EPA requirements for the facility, the October 2020 event included sampling all DMP wells for Toxic Substances Control Act parameters total organic carbon and polychlorinated biphenyls (PCBs). Those results are presented in the laboratory analytical report included in Appendix A of the attached report. No PCBs were detected in any well during the event.

As required by the Post-Closure Plan, the DMP event report is being submitted within 90 days of the October 7 completion of the 2020 second semiannual sampling event; i.e., by January 5, 2021.

Please call me at (513) 724-6114 if you have any questions regarding this submittal.

Sincerely,
CECOS International, Inc.

Andrew Thompson
Environmental Manager

Attachments: *Detection Monitoring Program, 2020 Second Semiannual Groundwater Quality and Statistical Analysis Results, CECOS International, Inc. - Aber Road Facility*

cc: Jae Lee, US EPA Region 5
Todd Gmitro, US EPA Region 5
Hannah Lubbers, Director – OEQ, Clermont County
Joe Montello, Republic Services, Inc.
Michael Gibson, Eagon & Associates, Inc.

File: B.3

DETECTION MONITORING PROGRAM
2020 SECOND SEMIANNUAL
GROUNDWATER QUALITY AND
STATISTICAL ANALYSIS RESULTS

CECOS INTERNATIONAL, INC.
ABER ROAD FACILITY
WILLIAMSBURG, OHIO

EPA ID # OHD-087-433-744

Prepared for:

CECOS INTERNATIONAL, INC.

Prepared by:

EAGON & ASSOCIATES, INC.
Worthington, Ohio

November 19, 2020

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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Submitted by:

_____

Michael T. Gibson, CPG
Hydrogeologist
Eagon & Associates, Inc.

TABLE OF CONTENTS

FIGURES

TABLES

TABLE OF CONTENTS

APPENDICES

DETECTION MONITORING PROGRAM
2020 SECOND SEMIANNUAL
GROUNDWATER QUALITY AND
STATISTICAL ANALYSIS RESULTS
CECOS INTERNATIONAL, INC. – ABER ROAD FACILITY

1.0 INTRODUCTION

This report presents the results of the 2020 second semiannual Detection Monitoring Program (DMP) groundwater sampling event performed at CECOS International Inc.'s (CECOS) Aber Road facility in Williamsburg, Ohio (Figure 1). The report has been prepared by Eagon & Associates, Inc. (Eagon) on behalf of the facility. The 2020 second semiannual DMP groundwater sampling event was completed October 5-7, 2020.

CECOS is presently performing groundwater detection monitoring activities in accordance with the Resource Conservation & Recovery Act (RCRA) for six closed regulated units at the Aber Road facility: Secure Chemical Management Facility 6 (SCMF 6), SCMF 7, SCMF 8, SCMF 9, SCMF 10, and Fire Pond 4/5 (Figure 1). Although the regulated units were closed under the Interim Status hazardous waste regulations, groundwater monitoring activities are performed in accordance with Ohio EPA's more comprehensive permitted status regulations; i.e., OAC Rules 3745-54-90 through 54-100. The 2020 first semiannual DMP sampling event was performed in accordance with the facility's Ohio EPA-approved Post-Closure Plan dated March 2019.

Included herein is a summary of the October 2020 field activities, analytical results, laboratory quality assurance and quality control (QA/QC) information, chain-of-custody records, field information forms, field-meter calibration records, and the statistical analysis results. There were no statistically significant concentrations of any constituent observed for any monitoring well during the event.

1.1 Status of the Groundwater Monitoring Program

Four hydrostratigraphic zones are monitored as part of the DMP. Included in descending order are the Upper Sand, the 880 Sand, the Channel Sand, and the Bedrock-Till Interface. Only the BTI is present in all areas (Figures 2 through 5).

The DMP groundwater monitoring network consists of 45 monitoring wells, as follows:

- **Upper Sand**: one background and eight point-of-compliance monitoring wells;
- **880 Sand:** one background and 15 point-of-compliance wells;
- **Channel Sand:** one background and two point-of-compliance wells; and
- **BTI:** one background and 16 point-of-compliance wells.

In addition, site-wide water levels are measured semiannually in piezometers completed in each of the four monitoring zones. Figures 2 through 5 show the monitoring well and piezometer locations for each monitoring horizon, respectively. Tables 1A through 1D list the monitoring wells and piezometers completed in each monitoring zone.

The indicator constituents statistically evaluated for the Upper Sand and 880 Sand zones consist of the 62 U.S. EPA SW-846 Methods 8260 and 8011 volatile organic compounds (VOCs) listed on Table 11 of the facility's March 2019 Post-Closure Plan (PCP). The statistical indicator constituents for the Channel Sand and BTI zones include the same list of VOCs, plus the dissolved RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. The Upper Sand and 880 Sand wells are sampled for the RCRA metals; however, those results are for informational purposes only and are not statistically evaluated. In accordance with the statistical analysis program, all point-of-compliance wells in each of the four monitoring horizons are evaluated for their respective indicator constituents during each routine semiannual event.

In addition to the post-closure groundwater monitoring activities, the DMP monitoring wells are sampled for the facility's Toxic Substances Control Act (TSCA) parameters and those

analytical results are also presented herein. The TSCA-specific parameters analyzed in addition to the DMP parameters are polychlorinated biphenyls (PCBs) and total organic carbon (TOC). TOC is naturally occurring and is regularly detected in most wells. No PCBs were detected in any sample collected during the October 2020 event.

2.0 EVENT SUMMARY

2.1 Field Activities

Groundwater sampling activities conducted during the 2020 second semiannual sampling event were performed by Eagon. Site-wide water levels were measured on October 5, 2020. Quality assurance/quality control (QA/QC) samples collected during the event included three duplicate samples, one field-blank sample, one matrix spike sample, and one matrix spike duplicate sample. The QA/QC samples were analyzed for all of the parameters included in the event. A trip blank was analyzed for VOCs.

As part of the routine event, the monitoring wells were purged using low-flow sampling protocols or were purged to dryness prior to sample collection following methods described in the Post-Closure Plan. The wells were sampled immediately following purging in low-flow wells and were sampled when adequate recharge had occurred in wells that were purged dry. Samples were collected from wells purged dry no later than 24 hours after purging was completed.

Field measurements of depth to water, pH, temperature, specific conductance, turbidity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured and recorded at each well. Depth to water, pH, temperature, and specific conductance measurements were used to monitor stabilization during purging for the purpose of determining when adequate purging had occurred in low-flow wells prior to sample collection. Field water-quality meters were calibrated and/or checked each day prior to sampling and the results of each calibration check are recorded on the field meter calibration forms, which are included in Appendix A.

Sample water for dissolved metals analysis was field filtered through inline 0.45-micron filters attached directly to the pump discharge tubing at each well.

A routine well inspection was completed at the time water levels were collected during the event. An obstruction at approximately three feet below the top of the 2-inch PVC well casing in piezometer P-515A precluded the measurement of a water level at that location. Piezometer P-515A is completed in the 880 Sand and is located upgradient and north of the facility. The piezometer is non-essential to the water-level monitoring network. Options to remedy the obstruction will be evaluated prior to completing the spring 2021 semiannual sampling event. Separately, several well protector lids were observed to be in need of replacement. The lids for these wells will be replaced by site personnel prior to the spring 2021 sampling event. The results of well integrity inspections performed at each monitoring well and piezometer and any corrective actions taken are presented on inspection reports on file at the Site.

The field information forms and laboratory analytical data report for the event are included in Appendix A. Water levels, purge information, sample observations, and field parameters measured at each well at the time of purging and sampling are included on the field information forms.

2.2 Water Levels and Groundwater Flow

Groundwater flow conditions have been characterized for the 2020 second semiannual event using the October 5, 2020 water-level elevations measured in the monitoring wells and piezometers. All water levels were measured prior to purging any well and are summarized for the Upper Sand, 880 Sand, Channel Sand, and BTI in Tables 1A through 1D, respectively.

Figure 2 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the Upper Sand at the time of the October 2020 sampling event. The Upper Sand is not present beneath the regulated units where it was excavated during construction, nor is it present in other areas of the facility located outside of its natural areal extent shown on Figure 2. Water levels and flow orientations in the Upper Sand during the event were

consistent with previous observations, with groundwater flow generally toward the south in the vicinity of the regulated units.

The groundwater flow velocity in the Upper Sand at the time of the October 2020 sampling event has been calculated using the following formula:

$$\bar{v} = \frac{Ki}{n}$$

where: $\bar{v}$ = average linear flow velocity in feet per day (ft/d)

K = hydraulic conductivity (ft/d)

i = hydraulic gradient (dimensionless)

n = effective porosity (percent)

Assuming: K = 5.0 x 10^{-3} centimeters per second (cm/s), or 14 ft/d, based on the 1989 RCRA Facility Investigation (RFI); i = 2.5 x 10^{-2} in October 2020; and n = 25%; the calculated average linear groundwater flow velocity in the Upper Sand in the vicinity of the regulated units was approximately 1.4 ft/d during the event.

Figure 3 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the 880 Sand at the time of the October 2020 event. As with the Upper Sand discussed above, the 880 Sand is not present where it was excavated beneath the regulated units and has limited natural areal extent outside of the units. Water levels and flow orientations in the 880 Sand during the event were consistent with previous observations. The groundwater flow direction in the vicinity of the regulated units was generally toward the south, with slight southeastward and southwestward variations in some areas (Figure 3).

Assuming: K = 1.0 x 10^{-2} cm/s (28.3 ft/d) (RFI); i = 2.0 x 10^{-2} in October 2020; and n = 25%; the calculated average linear groundwater flow velocity in the 880 Sand in the vicinity of the regulated units was approximately 2.2 ft/d during the event.

Figure 4 shows the contoured water-level elevations and groundwater flow conditions within the Channel Sand at the time of the sampling event. Water levels and flow orientations were consistent with previous observations. The groundwater flow direction in the Channel Sand follows the discrete nature of the unit and showed an eastward component of flow in the northwestern half of the facility and a south-southeastward component of flow in the vicinity of SCMF 10 during the event.

Assuming: $K = 1.0 \times 10^{-1}$ cm/s (283 ft/d) (RFI); $i = 3.3 \times 10^{-4}$ in October 2020; and n = 25%; the calculated average linear groundwater flow velocity in the Channel Sand in the vicinity of the regulated units was approximately 0.4 ft/d during the event.

Figure 5 shows the contoured water-level elevations and groundwater flow conditions observed across the site within the Bedrock-Till Interface (BTI). October 2020 water levels and flow orientations were generally consistent with previous observations. The groundwater flow direction in the BTI varies across the site as shown on Figure 5 and is characterized as southwesterly in the western part of the site, southerly in the central area, and southeasterly in the eastern part of the site.

Assuming: $K = 5.0 \times 10^{-5}$ cm/s (0.14 ft/d) (RFI); $i = 7.3 \times 10^{-3}$ in October 2020; and n = 20%; the calculated average linear groundwater flow velocity in the BTI in the vicinity of the regulated units was approximately 5.1×10^{-3} ft/d during the event.

The general flow directions for each of the four units discussed above are consistent with previous observations. The adequacy of well placement in the groundwater monitoring network has been evaluated using the October 2020 groundwater flow conditions and the requirements of OAC Rule 3745-54-97(A). Based upon that review, the groundwater monitoring network for the Detection Monitoring Program at the Aber Road facility continues to consist of a sufficient number of appropriately placed monitoring wells to detect statistically significant concentrations of hazardous constituents downgradient of the regulated units.

2.3 Sample Analyses and Quality Assurance

The analytical results for all inorganic parameters at each well in the Upper Sand, 880 Sand, Channel Sand, and Bedrock-Till Interface are summarized on Tables 2, 3, 4, and 5, respectively. Table 6 summarizes the field-bias (i.e., field blank and trip blank) and laboratory method blank results from the event. The analytical methods, PQLs (identified as "RL" in the laboratory reports), and method detection limits (MDLs) are shown on the laboratory analytical report included in Appendix A. All laboratory analyses of groundwater samples were performed by Eurofins TestAmerica Laboratories (ETA) of Amherst, New York. All field analyses were performed by Eagon personnel. No QA/QC issues that required corrective action were observed during the event. The field and laboratory analytical results for October 2020 will be entered into the facility's 2020 annual groundwater reporting electronic database that will be submitted to Ohio EPA by March 1, 2021.

Duplicate samples were collected from monitoring wells MP-213A, MP-230A, and MP-232A during the October 2020 event. The duplicate results are in close agreement with their associated monitoring well sample results. Relative percent differences (RPD) for constituents detected in all of the original and duplicate samples are shown next to their respective original well sample results on Table 3 and were below 10 for all detected constituents.

A field blank sample (Field Blank–DMP) also was collected for QA/QC purposes and was prepared using laboratory supplied, reagent-grade deionized water. The field blank was analyzed for all parameters included in the monitoring event. There were no detections of any constituent analyzed in the field blank. A trip blank prepared by the laboratory was analyzed for VOCs and there were no detections.

Laboratory QA/QC was evaluated internally by laboratory personnel and a summary narrative of that evaluation is included in Appendix A. No QA/QC issues noted by the laboratory required corrective action.

3.0 STATISTICAL ANALYSIS

Statistical analysis of the October 2020 semiannual DMP monitoring results was completed in accordance with the statistical program detailed in Section 11 (Groundwater Statistical Analysis Plan) of the Post-Closure Plan dated March 2019. The October 2020 results for the eight dissolved RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were statistically evaluated for the two point-of-compliance (POC) Channel Sand monitoring wells (MP-281C and MP-406C) and the 16 POC BTI monitoring wells (MP-233R, MP-234R, MP-235R, MP-237, MP-238R, MP-241R, MP-244R, MP-250, MP-274, MP-279, MP-280 and MP-281, MP-404, MP-407, MP-408, and MP-409). In addition, statistical analysis of the results for the 62 indicator VOCs has been performed for all downgradient monitoring wells in all four monitoring horizons.

Statistical analysis was performed via the comparison of the October 2020 results to intrawell prediction limits calculated for the dissolved indicator metals using the *Sanitas*™ statistical software package, as presented in the Post-Closure Plan. The VOC results were compared to their respective PQLs.

3.1 Background Data

The intrawell statistical methods used to evaluate the dissolved metals results at the Aber Road facility involve comparisons between monitoring data collected during a background period to future semiannual sampling results from the same well to determine if the results are statistically significant. Current summary background statistics computed for each downgradient well, for each RCRA metal, are presented in Appendix B.

3.2 Statistical Analysis of October 2020 Dissolved Metals Results

The results of the statistical analyses for the dissolved metals arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver were completed for the Channel Sand and BTI

zones and are presented in Appendix B. There were no statistically significant metals results identified during the event.

As with past events, arsenic and barium were detected at most wells. Cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above their PQLs at any Channel Sand or BTI monitoring well during the event. Arsenic and barium are naturally occurring in all saturated intervals monitored at the site.

3.3 Statistical Analysis of VOCs

In accordance with the statistical analysis plan, a statistically significant result for any one of the 62 VOCs on the DMP indicator parameter list is defined as a confirmed detection at or above the constituent's PQL at the point-of-compliance. Thus, if a VOC is detected at or above its PQL in a sample collected during a routine sampling event, and a resample and reanalysis is conducted and the VOC also is detected at or above its PQL in the resample, then the VOC result reported during the routine event is considered statistically significant.

Summaries of comparisons of the VOC results to their respective PQLs at the downgradient monitoring wells are presented in Tables 2 through 5. An "ND" result on the tables indicates that all 62 VOCs analyzed were not detected at or above their respective PQLs for that well. There were no VOCs detected at or above their respective PQLs at any monitoring well during the October 2020 event (Appendix A). Therefore, no statistical exceedances occurred for VOCs.

4.0 EVALUATION OF DISSOLVED METALS RESULTS FROM THE UPPER SAND AND 880 SAND

Semiannual dissolved metals results from the Upper Sand and 880 Sand monitoring networks are not statistically evaluated; however, those results are reviewed qualitatively for reference purposes. For the October 2020 event, time-series plots were generated for the eight dissolved metals routinely sampled in the Upper Sand and 880 Sand zones and are presented in Appendix C (Upper Sand) and Appendix D (880 Sand). Included are plots for arsenic, barium,

cadmium, chromium, lead, mercury, selenium, and silver. Dissolved arsenic and chromium results are available for wells included in the monitoring program since as far back as 1997, whereas dissolved barium, cadmium, lead, mercury, selenium, and silver have been routinely analyzed since October 2012.

As shown on the time-series plots, the October 2020 metals results were generally within the range of previously observed concentrations in both the Upper Sand and 880 Sand. None of the results were substantially divergent from historical results. Barium (0.049 mg/L) at Upper Sand monitoring well MP-402A and arsenic (0.025 mg/L) at 880 Sand well MP-280A were slightly above their historical ranges in both wells; however, both results were within the normal range of concentrations observed at other Site wells in the respective zones. In general, fluctuations in barium concentrations at MP-402A display a seasonal relationship, with higher concentrations often observed during the fall events compared to spring. Seasonality in naturally occurring barium concentrations are evident for a number of wells in both the Upper Sand and 880 Sand (Appendices C and D). Arsenic is typically detected in most wells and barium was detected in all Upper Sand and 880 Sand wells during the event.

No detections of any other metals at or above their respective PQLs in the 880 Sand or Upper Sand monitoring wells were identified during the event. Based on the review of the October 2020 sampling results, no additional evaluation of the Upper Sand and 880 Sand monitoring zones is warranted at this time.

5.0 SUMMARY

Analysis of the 2020 second semiannual DMP groundwater quality sampling results collected in October 2020 did not identify any statistically significant results for the indicator constituents at any well downgradient of the regulated units at the Aber Road facility.

October 2020 sampling results for TOC and PCBs for all 45 DMP monitoring wells are also presented herein in Appendix A. TOC and PCBs are analyzed during routine DMP sampling

events in accordance with the facility's TSCA monitoring requirements. No PCBs were detected in any DMP monitoring well during the event.

The next routine semiannual DMP groundwater sampling event is tentatively scheduled for April 2021.

TABLES

TABLE 2.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
UPPER SAND ZONE
OCTOBER 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-206AR 10/7/2020	MP-231AR 10/7/2020	MP-235CR 10/7/2020	MP-244ARR 10/7/2020	MP-401A 10/7/2020	MP-402A 10/7/2020	MP-403A 10/7/2020	MP-404A 10/6/2020	MP-405A 10/7/2020
Arsenic, Dissolved	mg/L	<0.001	**0.0035**	<0.001	**0.011**	<0.001	**0.010**	<0.001	<0.001	<0.001
Barium, Dissolved	mg/L	**0.0094**	**0.0059**	**0.011**	**0.068**	**0.049**	**0.049**	**0.012**	**0.044**	**0.015**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
OCTOBER 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-210AR 10/6/2020	MP-211BR 10/7/2020	MP-213A 10/7/2020	Duplicate-DMP-3 10/7/2020	RPD	MP-214BR 10/6/2020	MP-228AR 10/6/2020
Arsenic, Dissolved	mg/L	**0.0018**	<0.001	<0.001	<0.001	NC	**0.0025**	**0.0041**
Barium, Dissolved	mg/L	**0.055**	**0.040**	**0.027**	**0.028**	3.64%	**0.009**	**0.030**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	NC	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	NC	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	NC	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	NC	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	NC	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	NC	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	NC	ND	ND

ND - no detections at or above PQL.

NC - Not Calculable

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
OCTOBER 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-230A 10/7/2020	Duplicate-DMP-2 10/7/2020	RPD	MP-232A 10/6/2020	Duplicate-DMP-1 10/6/2020	RPD	MP-233AR 10/6/2020	MP-234AR 10/7/2020	MP-235BR 10/7/2020
Arsenic, Dissolved	mg/L	**0.0110**	**0.0110**	0.00%	**0.0084**	**0.0079**	6.13%	**0.0088**	**0.0023**	**0.0023**
Barium, Dissolved	mg/L	**0.033**	**0.033**	0.00%	**0.026**	**0.026**	0.00%	**0.023**	**0.011**	**0.013**
Cadmium, Dissolved	mg/L	<0.001	<0.001	NC	<0.001	<0.001	NC	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	NC	<0.005	<0.005	NC	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	NC	<0.005	<0.005	NC	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	NC	<0.0002	<0.0002	NC	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	NC	<0.015	<0.015	NC	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	NC	<0.003	<0.003	NC	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	NC	ND	ND	NC	ND	ND	ND

ND - no detections at or above PQL.

NC - Not Calculable

TABLE 3.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
880 SAND ZONE
OCTOBER 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-250A 10/7/2020	MP-251A 10/7/2020	MP-274A 10/7/2020	MP-277A 10/7/2020	MP-280A 10/6/2020	MP-401B 10/7/2020
Arsenic, Dissolved	mg/L	**0.0070**	**0.0027**	**0.0800**	**0.0067**	**0.0250**	**0.0059**
Barium, Dissolved	mg/L	**0.031**	**0.120**	**0.028**	**0.025**	**0.024**	**0.039**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.

NC - Not Calculable

TABLE 4.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
CHANNEL SAND ZONE
OCTOBER 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-281C 10/7/2020	MP-286C 10/7/2020	MP-406C 10/7/2020
Arsenic, Dissolved	mg/L	**0.0044**	**0.0035**	**0.0035**
Barium, Dissolved	mg/L	**0.053**	**0.140**	**0.150**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND

ND - no detections at or above PQL.

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
OCTOBER 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-228R 10/7/2020	MP-233R 10/6/2020	MP-234R 10/7/2020	MP-235R 10/7/2020	MP-237 10/7/2020	MP-238R 10/7/2020	MP-241R 10/7/2020	MP-244R 10/7/2020	MP-250 10/7/2020
Arsenic, Dissolved	mg/L	**0.0035**	**0.0026**	<0.001	<0.001	<0.001	<0.001	**0.0011**	<0.001	<0.001
Barium, Dissolved	mg/L	**0.073**	**0.430**	**0.041**	**0.044**	**0.029**	**0.045**	**0.044**	**0.018**	**0.048**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.00032	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.

TABLE 5.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
BEDROCK-TILL INTERFACE
OCTOBER 2020
CECOS - ABER ROAD FACILITY

Constituent	Units	MP-274 10/7/2020	MP-279 10/7/2020	MP-280 10/6/2020	MP-281 10/7/2020	MP-404 10/6/2020	MP-407 10/7/2020	MP-408 10/6/2020	MP-409 10/7/2020
Arsenic, Dissolved	mg/L	<0.001	<0.001	**0.0290**	<0.001	**0.0017**	<0.001	**0.0900**	**0.0017**
Barium, Dissolved	mg/L	**0.410**	**1.000**	**0.310**	**0.270**	**0.370**	**0.670**	**0.660**	**0.120**
Cadmium, Dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead, Dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, Dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Selenium, Dissolved	mg/L	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Silver, Dissolved	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
VOCs	ug/L	ND	ND	ND	ND	ND	ND	ND	ND

ND - no detections at or above PQL.

TABLE 6.
SUMMARY OF LABORATORY ANALYTICAL RESULTS
QA/QC SAMPLES
OCTOBER 2020
CECOS - ABER ROAD FACILITY

Constituent	Field Blank DMP	Method Blank	Trip Blank
Arsenic, Dissolved	<0.001	<0.001 (5)	--
Barium, Dissolved	<0.002	<0.002 (5)	--
Cadmium, Dissolved	<0.001	<0.001 (5)	--
Chromium, Dissolved	<0.005	<0.005 (5)	--
Lead, Dissolved	<0.005	<0.005 (5)	--
Mercury, Dissolved	<0.0002	<0.0002 (5)	--
Selenium, Dissolved	<0.015	<0.015 (5)	--
Silver, Dissolved	<0.003	<0.003 (5)	--
VOCs	ND	ND (4)	ND

ND - no detections at or above PQL.

-- Not Analyzed

( ) Number of Method Blank batches run by laboratory for parameter.

See Laboratory Report QA/QC section for separate analyses.

SECTION 1
PART A
ATTACHMENT II

CMI PERFORMANCE MONITORING EVALUATION

EAGON & ASSOCIATES, INC.

100 Old Wilson Bridge Road
Suite 115
Worthington, Ohio 43085
(614) 888-5760
eagoninc.com

May 21, 2020

Mr. Andrew Thompson
CECOS International, Inc.
5092 Aber Road
Williamsburg, Ohio 45176

RE: Administrative Order on Consent, O&M Progress Report No. 48
Exhibit 5 - Corrective Measures Implementation Performance Monitoring Evaluation
CECOS International, Inc. - Aber Road Facility
Docket No. V-W-024-94
EPA I.D. No. OHD 087 433 744

Dear Mr. Thompson:

Transmitted herewith is the Corrective Measures Implementation (CMI) Performance Monitoring Evaluation for CMI data collected during the April 2020 monitoring event at the closed Aber Road Facility. This evaluation is being provided to you for inclusion as Exhibit 5 of the Operation and Maintenance (O&M) Progress Report No. 48 that is to be submitted to the United States Environmental Protection Agency (U.S. EPA) by June 10, 2020.

APRIL 2020 MONITORING RESULTS

Compounds of Interest/Target Compound List Volatile Organic Compound Results – Outside Slurry Wall Monitoring Wells

The April 2020 monitoring event was performed in accordance with Section 5 of the July 2009 CMI O&M Manual. The event represented year twelve, quarter two of CMI monitoring as listed on Table 5.2 (Post Shutdown Monitoring Program/Groundwater Monitoring) of the CMI O&M Manual. Monitoring wells located outside the slurry wall were sampled for Compounds of Interest/Target Compound List (COI/TCL) volatile organic compounds (VOCs). Monitoring wells located outside the slurry wall are sampled semiannually in the spring and fall and locations inside the slurry wall are sampled annually in the fall.

During the April 2020 event, there were no detections of COI VOCs at or above their respective method detection limits (MDLs) in the monitoring locations outside the slurry wall. Low-level estimated (J-flagged) concentrations of methylene chloride were reported in 11 of the 14 samples and methylene chloride also was present in the associated laboratory blank (B) samples; therefore, the results are qualified as "JB" and are considered non-detect for this analysis. Methylene chloride is a common laboratory contaminant. A summary of the April 2020 COI VOC results is presented on attached Table 1. Formal data validation of the April 2020 results will be included in CMI Report No. 49 due December 10, 2020.

Groundwater Cleanup Standards (GWCS) shown on Table 1 and listed in Section 5.2 of the July 2009 CMI O&M Manual continue to be achieved for the COIs at the 14 CMI wells located outside the slurry wall.

Semiannual Gradient Analysis and Elevation Differences for Nested Wells/Piezometers

Section 5.6 of the July 2009 CMI O&M Manual requires semiannual groundwater elevation measurement for a minimum of five years at six nested well pairs that straddle the slurry wall to assist in identifying hydraulic gradients across the slurry wall following shutdown of the gradient control pumping system in 2009. The initial five-year gradient monitoring period was completed as of the October 2013 event. As a result, CECOS may request U.S. EPA approval in the future to reduce the frequency of measuring groundwater elevations for gradient analysis to an annual basis.

Groundwater elevation measurements were collected for the CMI gradient analysis well network on April 6, 2020, prior to initiating the CMI groundwater sampling event. Figure 1 shows the locations of the six nested wells. As required in Section 5.7.2 of the CMI O&M Manual, gradient evaluations for the six nested wells are presented in Exhibit 2 and time-series plots depicting elevation differences for each nested pair are presented herein as Figures 2 through 7.

During the April 2020 event, well pairs #3 (880PZ-2 and MP-305A) and #4 (MP-238AR and 880PZ-3) indicated inward gradients. Well pairs #1 (USPZ-1 and MP-303B), #2 (880PZ-1 and MP-208), #5 (880PZ-4 and MP-304A), and #6 (880PZ-5 and MP-241AR) indicated outward gradients. Outward gradients have been observed at these well pairs at times during past events and conditions in April 2020 were generally consistent with gradient relationships observed since system shutdown in 2009 (Figures 2 through 7). Well pairs #1 (Figure 2) and #4 (Figure 5) display seasonal effects on gradient relationships, with inward gradients commonly occurring.

As discussed in the June 30, 2008 "Aber Road Petition to Cease Groundwater Recovery", advective groundwater flow through the slurry wall is negligible due to the low hydraulic conductivity of the bentonite wall and the fact that the Upper Sand and 880 Sand zones were removed during slurry wall construction; therefore, the presence of an outward differential at some well pairs is not expected to result in contaminant transport across the slurry wall. Semiannual monitoring of wells outside the slurry wall continues to demonstrate that COI/TCL VOCs are not being transported across the slurry wall's hydraulic barrier.

Semiannual Potentiometric Surface Maps

Section 5.6 of the July 2009 CMI O&M Manual requires monitoring wells listed in Section 5.4 of the Manual to be used in developing semiannual groundwater elevation maps both inside and outside the slurry wall. This is as specified in Condition #1 of the March 31, 2009 U.S. EPA "Final Approval with Conditions/Modifications to Shutdown the Groundwater Gradient Control System."

Potentiometric surface maps for CMI wells screened in the Upper Sand, 880 Sand, and Bedrock-Till Interface (BTI) zones in April 2020 are shown on Figures 8, 9 and 10, respectively. Groundwater flow conditions in the Upper Sand and 880 Sand were similar in nature to historical conditions. The removal of formation material during cell construction and installation of the slurry wall as a hydraulic

barrier resulted in localized isolation of the remaining interior sands. Therefore, water levels in the Upper Sand and 880 Sand in the CMI area generally do not define well organized potentiometric surfaces. Groundwater flow in the BTI, which is below the depth of the slurry wall, was toward the southwest during the event in the vicinity of the CMI area, consistent with previous observations.

The next CMI performance monitoring event is scheduled for fall 2020 and will include sampling of the CMI monitoring wells located both outside and inside the slurry wall.

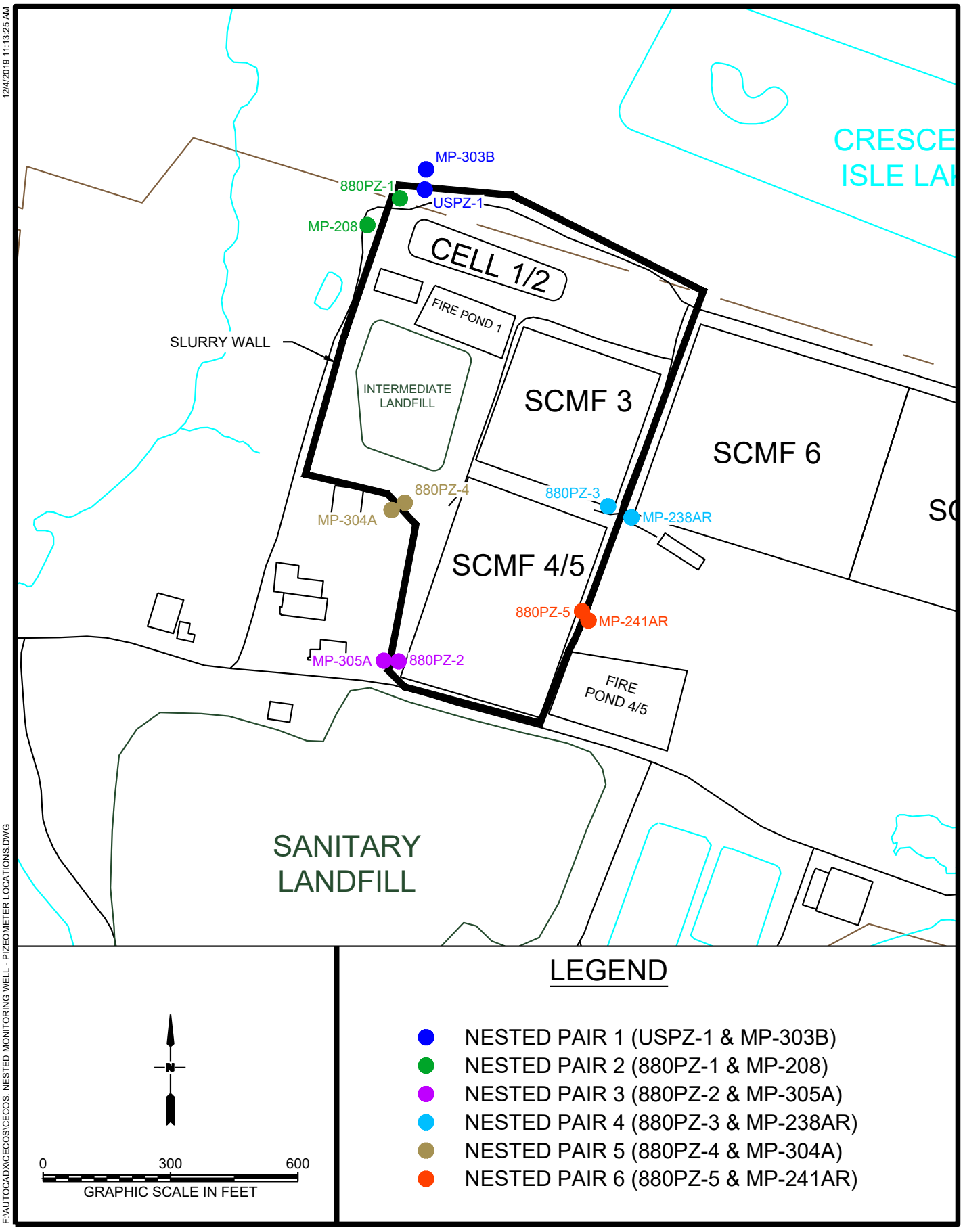
Please contact me at (614) 888-5760 if you have any questions.

Sincerely,

Michael T. Gibson, CPG
Hydrogeologist

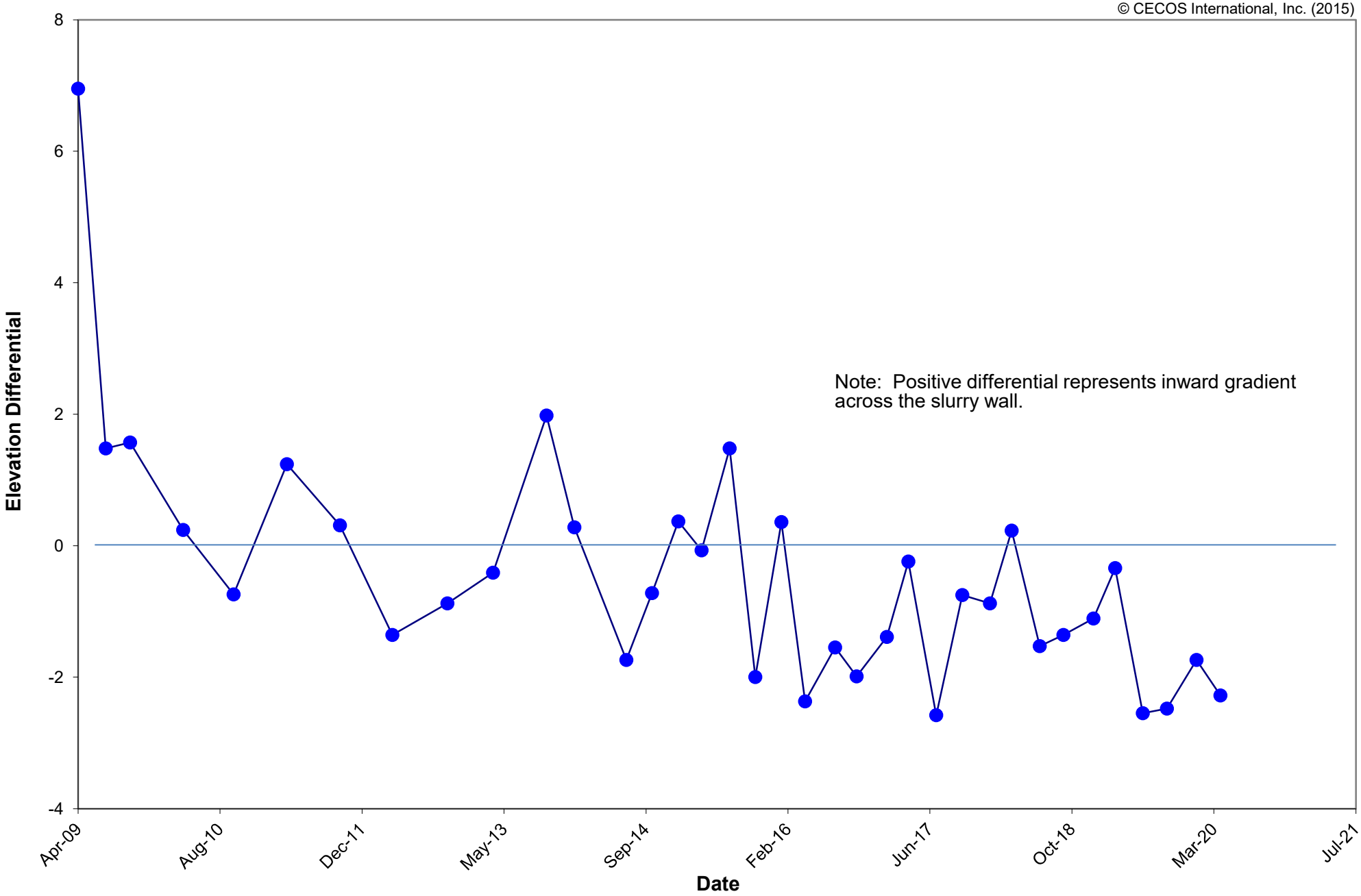
MTG/ns
encl.

FIGURES



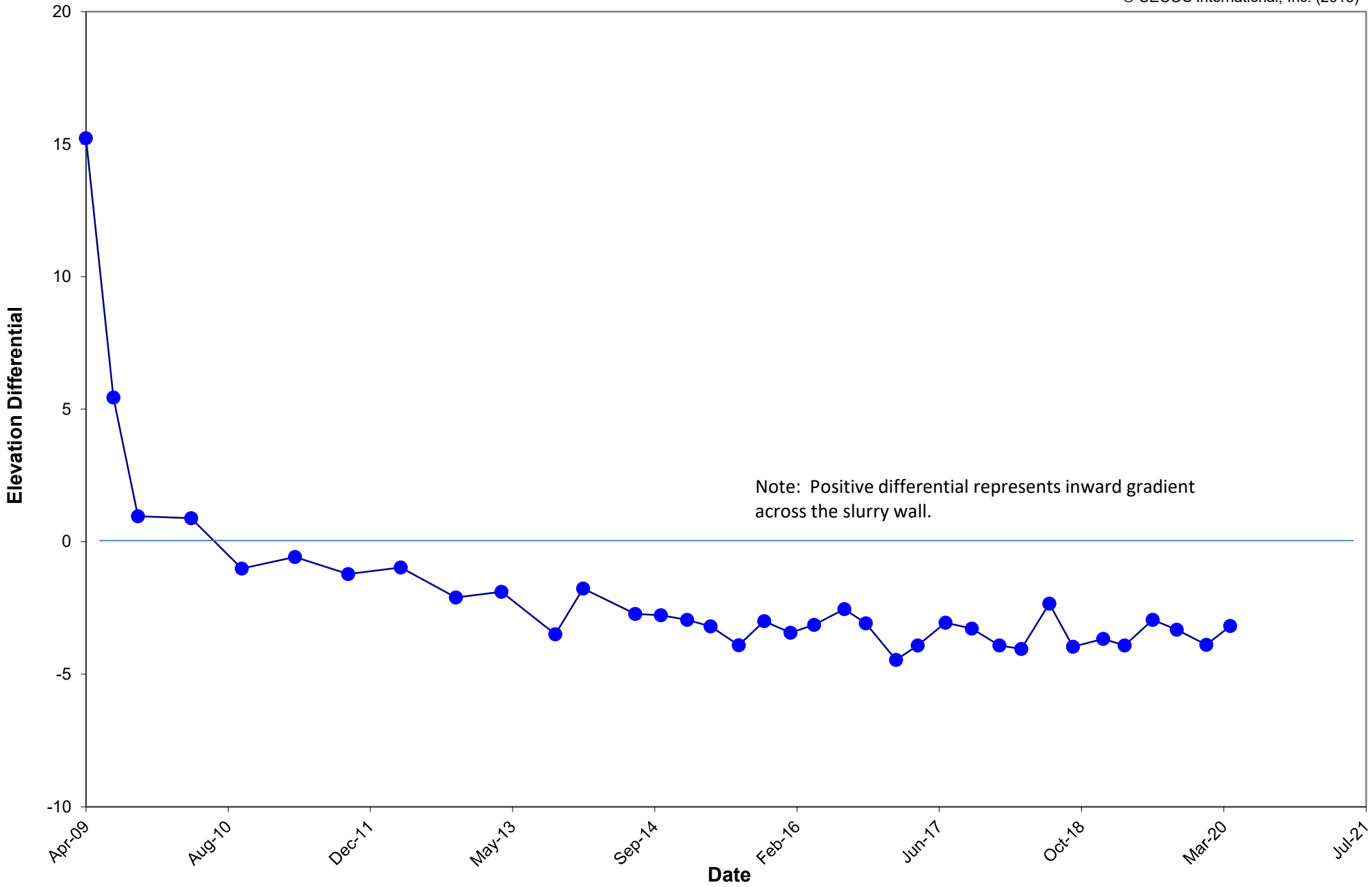
Aber Road Facility, Williamsburg, Ohio

FIGURE 1. NESTED MONITORING WELL / PIEZOMETER LOCATIONS



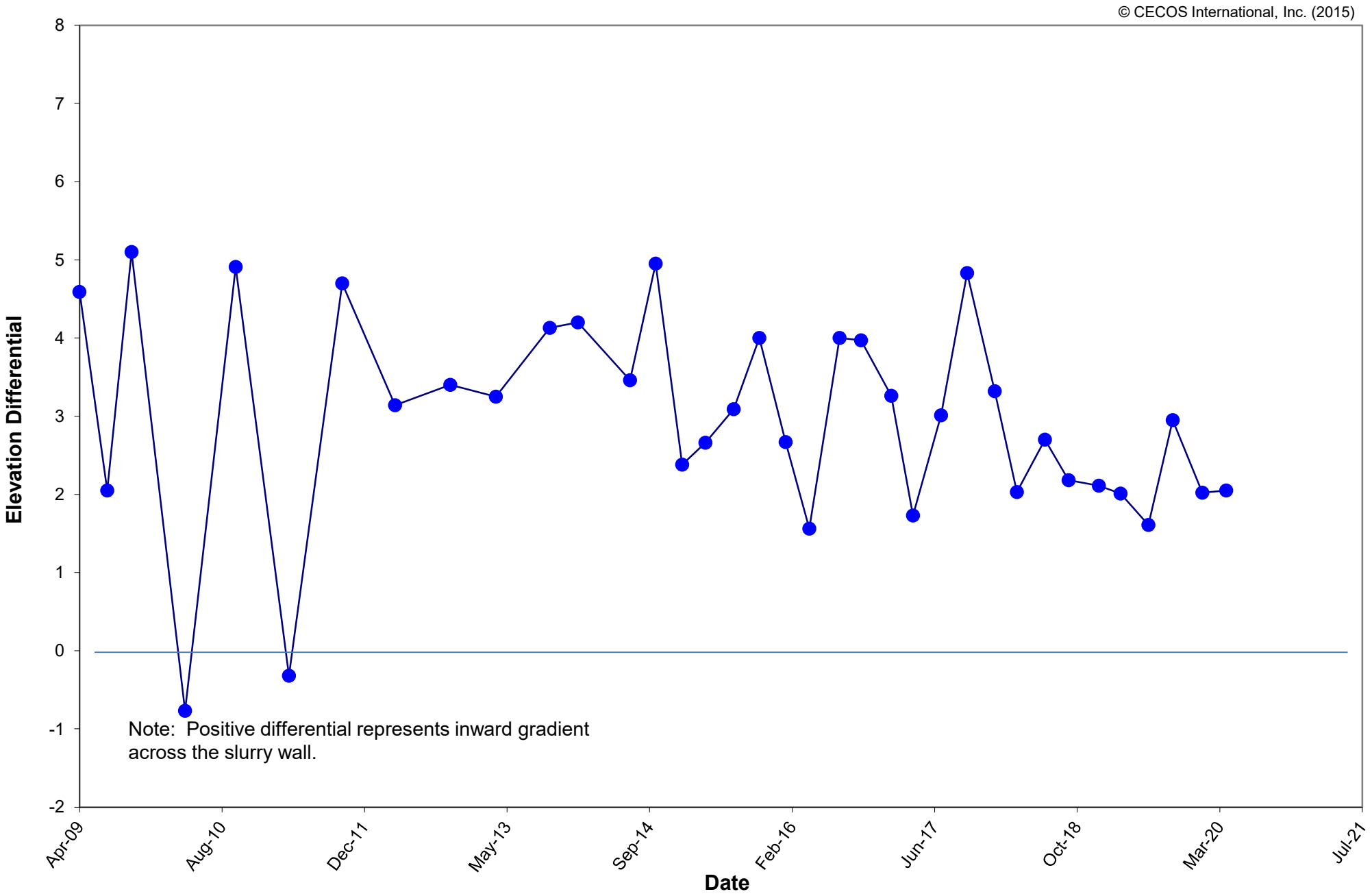
Aber Road Facility
Williamsburg, Ohio

Figure 2
Elevation Differential for
Well Pair 1: MP-303B & USPZ-1



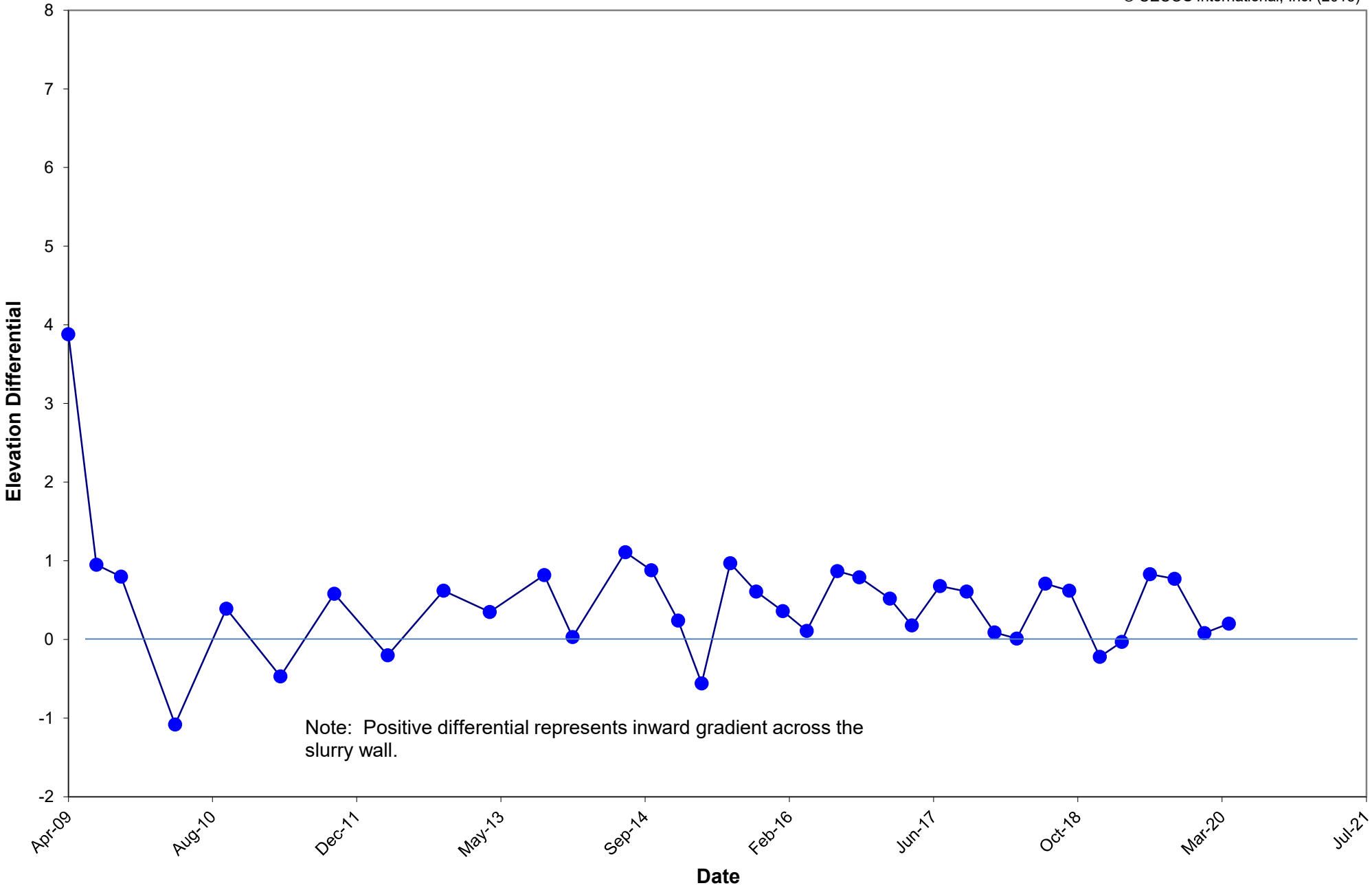
Aber Road Facility
Williamsburg, Ohio

Figure 3
Elevation Differential for
Well Pair 2: MP-208 & 880PZ-1



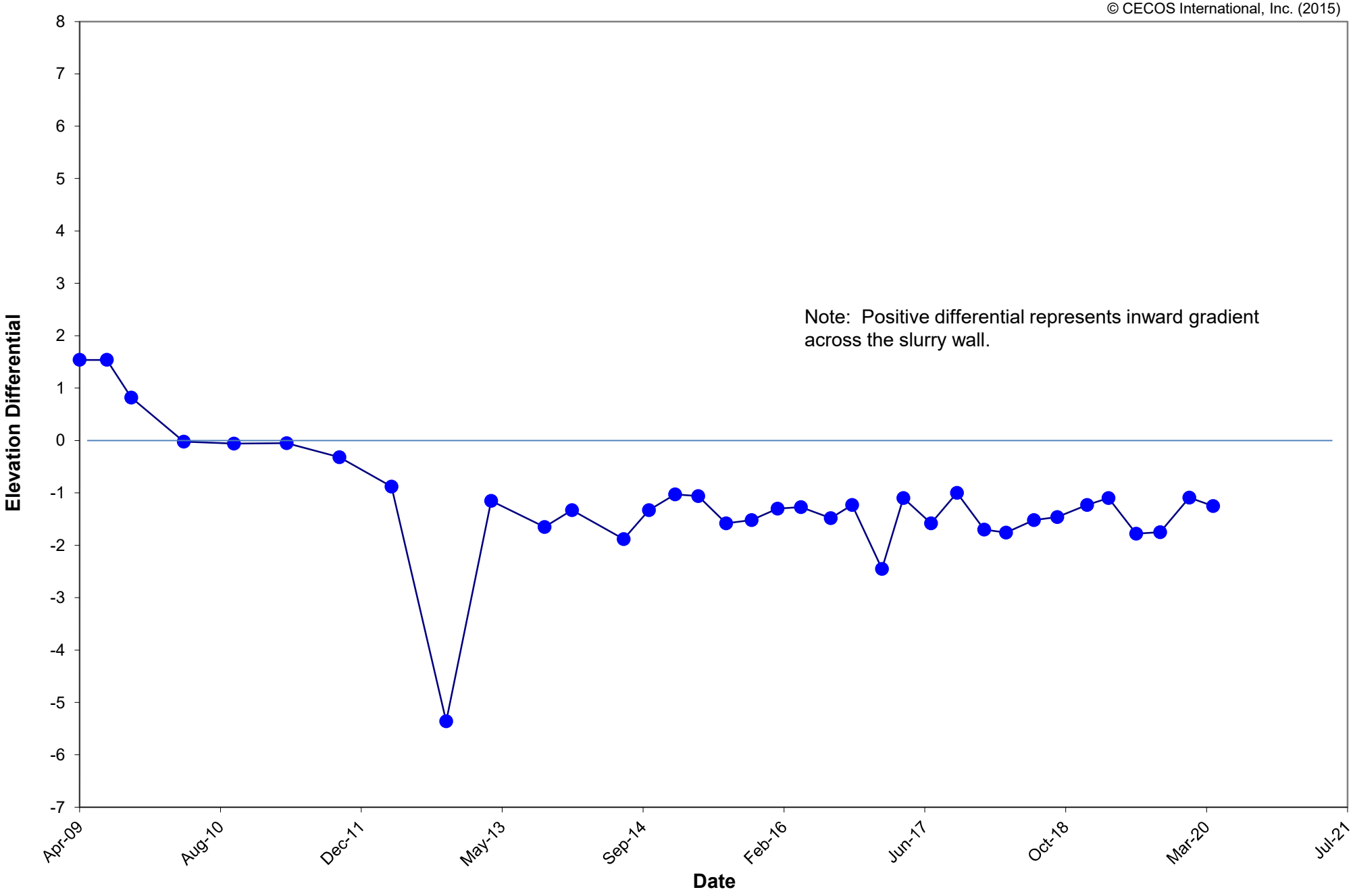
Aber Road Facility
Williamsburg, Ohio

Figure 4
Elevation Differential for
Well Pair 3: MP-305A & 880PZ-2



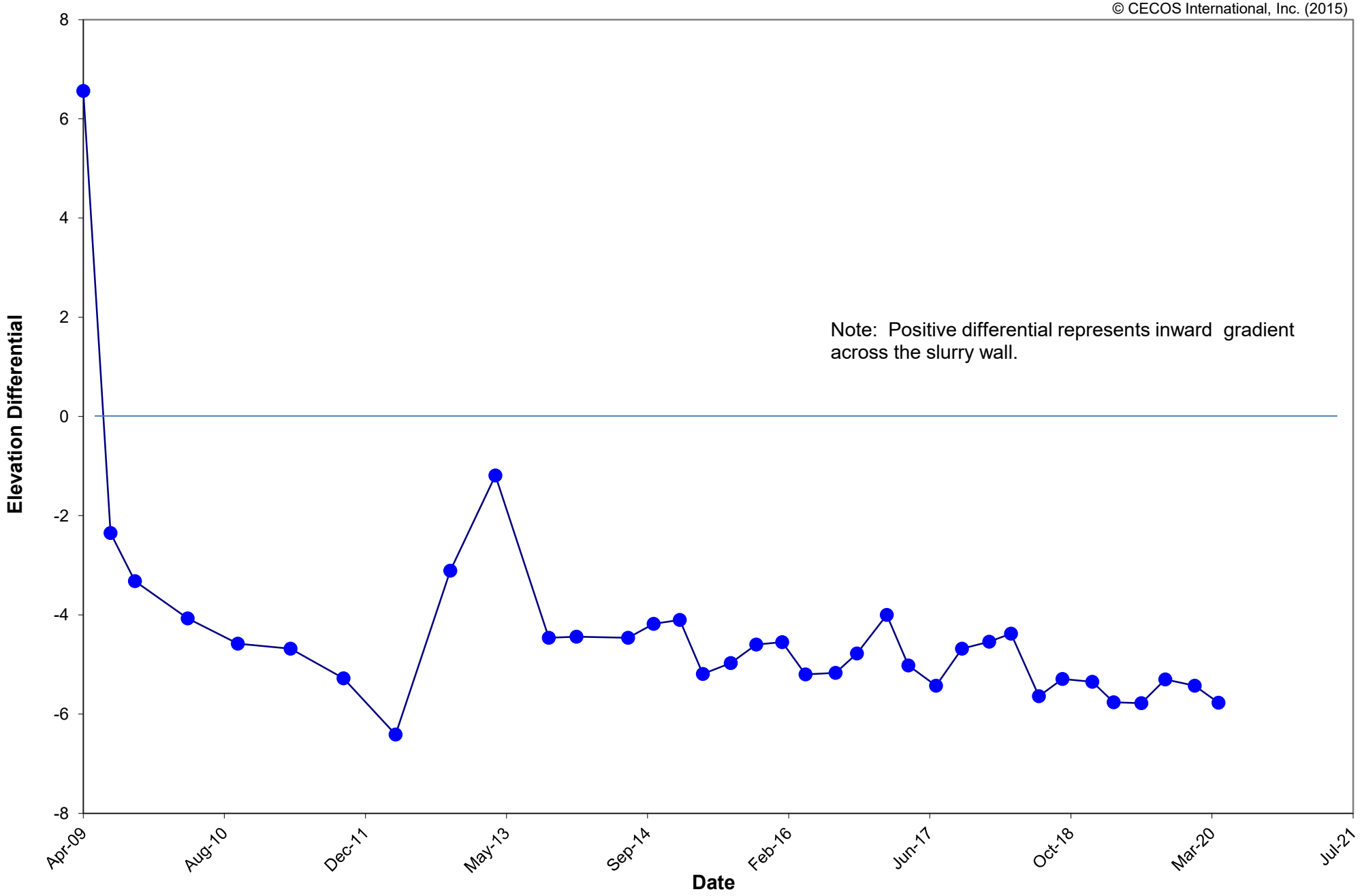
Aber Road Facility
Williamsburg, Ohio

Figure 5
Elevation Differential for
Well Pair 4: MP-238AR & 880PZ-3



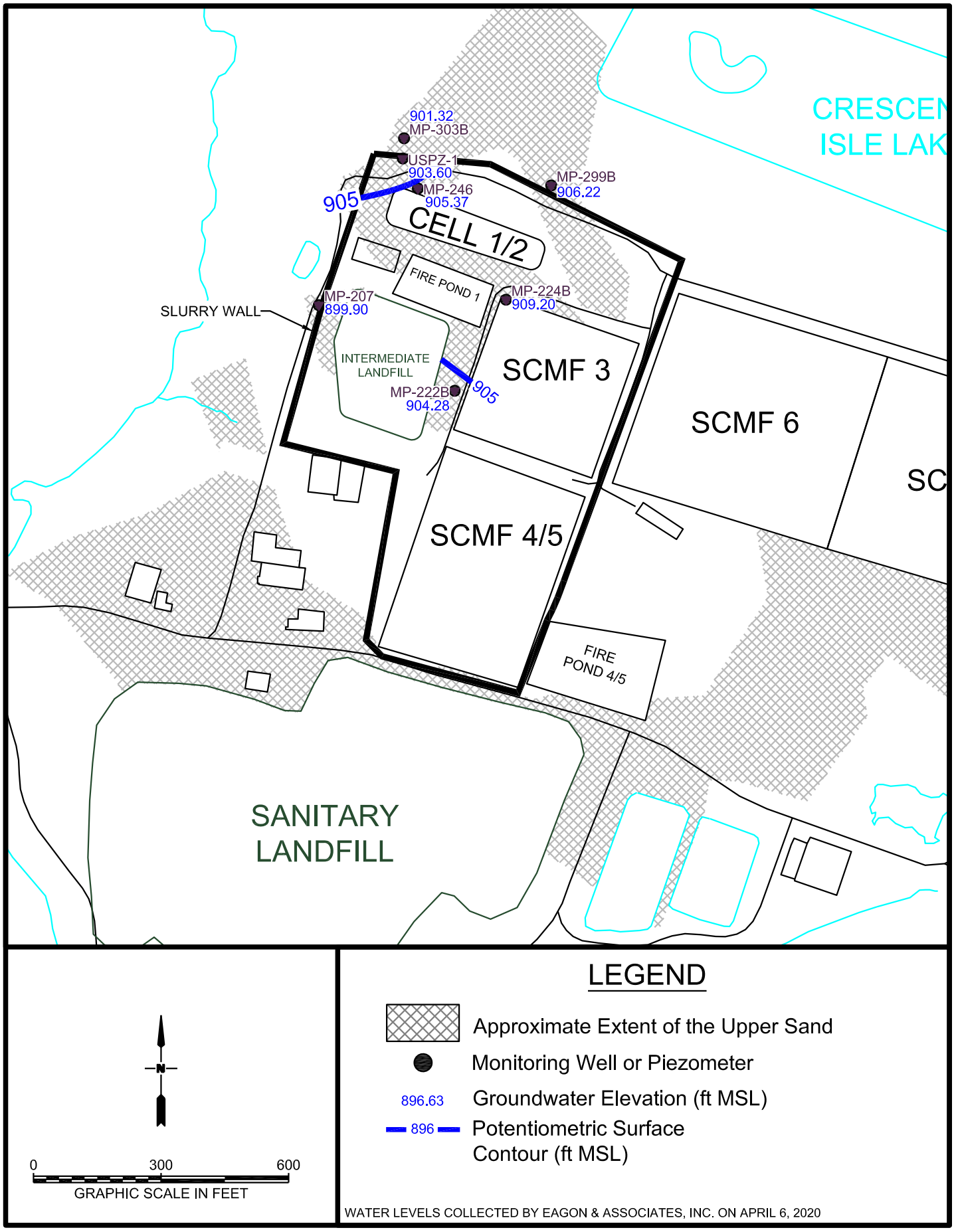
Aber Road Facility
Williamsburg, Ohio

Figure 6
Elevation Differential for
Well Pair 5: MP-304A & 880PZ-4



Aber Road Facility
Williamsburg, Ohio

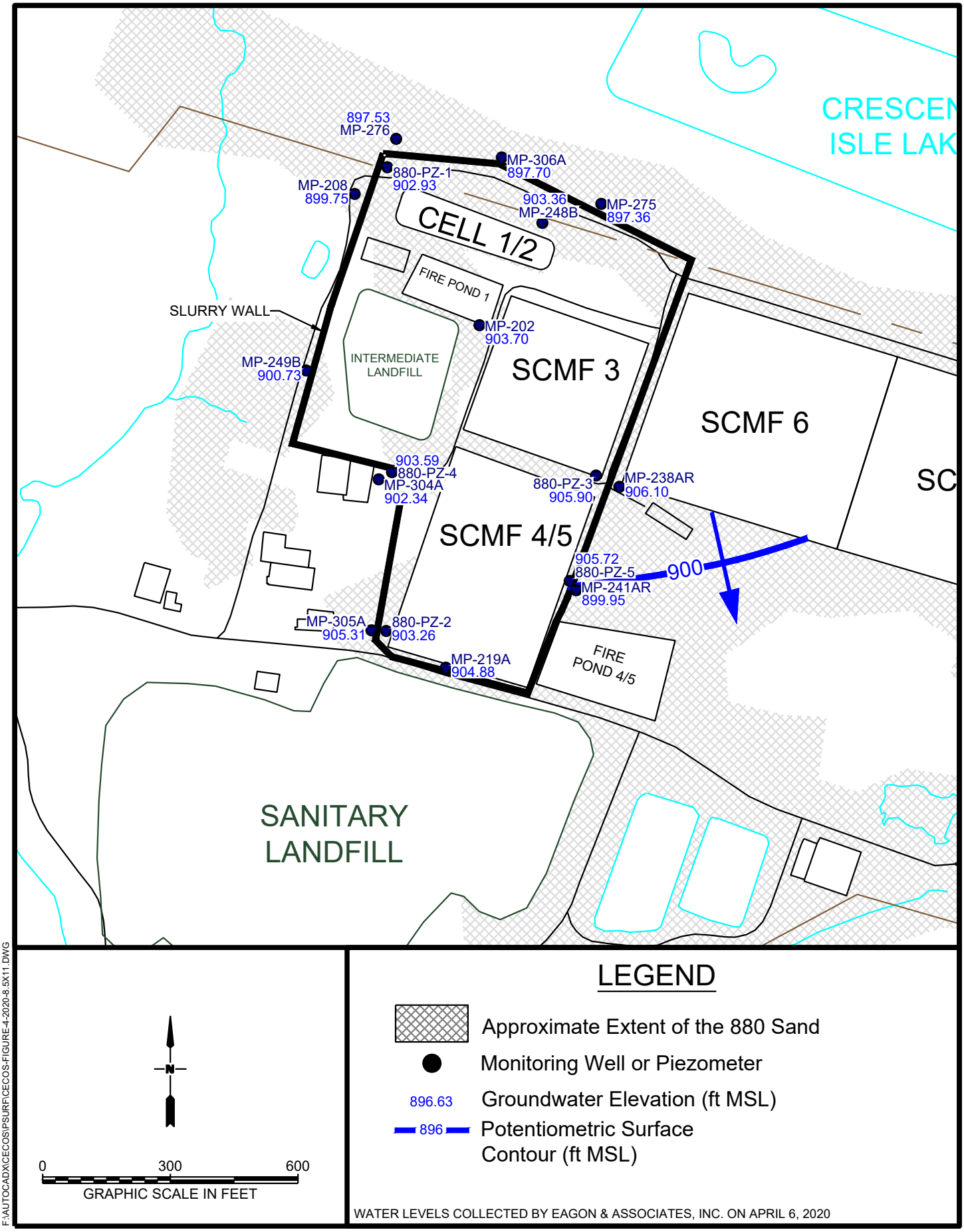
Figure 7
Elevation Differential for
Well Pair 6: MP-241AR & 880PZ-5



C:\USERS\RYAN\DESKTOP\CECOS-FIGURE-4-2020-8.5X11.DWG

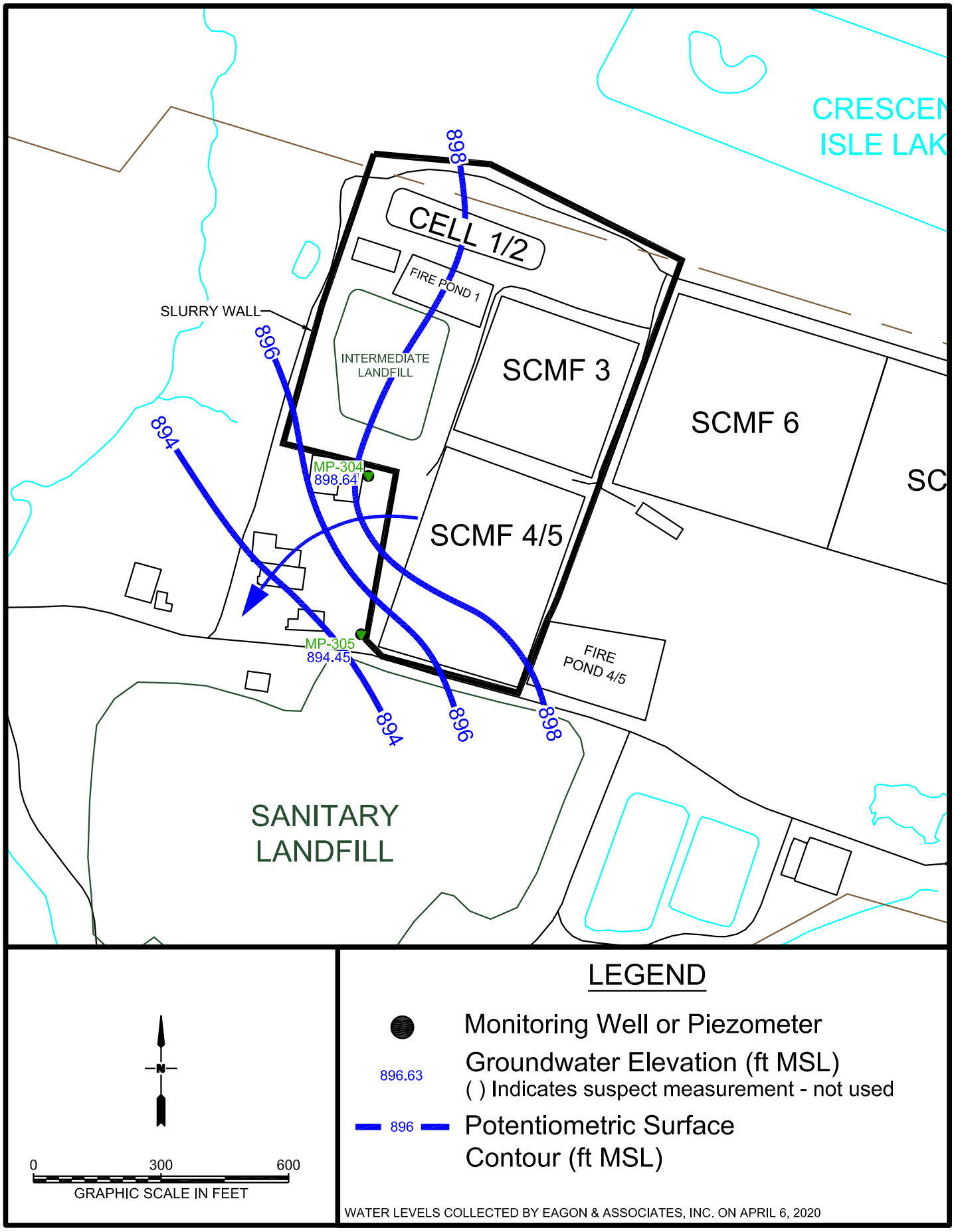
Aber Road Facility, Williamsburg, Ohio

FIGURE 8. POTENTIOMETRIC SURFACE OF THE UPPER SAND ZONE - CMI WELLS, APRIL 6, 2020



Aber Road Facility, Williamsburg, Ohio

FIGURE 9. POTENTIOMETRIC SURFACE OF THE 880 SAND ZONE - CMI WELLS, APRIL 6, 2020



C:\USERS\RYAN\DESKTOP\CECOS-FIGURE-4-2020-8.5X11.DWG

Aber Road Facility, Williamsburg, Ohio

FIGURE 10. POTENTIOMETRIC SURFACE OF THE BEDROCK TILL INTERFACE - CMI WELLS, APRIL 6, 2020

TABLES

TABLE 1.
SUMMARY OF APRIL 2020 CONSTITUENT OF INTEREST (COI) RESULTS AND COMPARISON TO CLEANUP STANDARDS AND ACTION LEVELS[1]
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Well	Sampling Date	Acetone (ug/L)	Benzene (ug/L)	Methyl ethyl ketone (ug/L)	Chloro-ethane (ug/L)	Dichloro-difluoro-methane (ug/L)	1,1-Dichloro-ethane (ug/L)	1,2-Dichloro-ethane (ug/L)	1,1-Dichloro-ethylene (ug/L)	cis-1,2-Dichloro-ethylene (ug/L)	trans-1,2-Dichloro-ethylene (ug/L)	Methylene chloride (ug/L)	Tetra-chloro-ethylene (ug/L)	1,1,1-Trichloro-ethane (ug/L)	Trichloro-ethylene (ug/L)	Trichloro-fluoro-methane (ug/L)	Vinyl chloride (ug/L)
Cleanup Standard (ug/L)[1]		**10000**	**5**	**61000**	**292000**	**20000**	**10000**	**5**	**7**	**70**	**100**	**5**	**5**	**200**	**5**	**31000**	**2**
Basis		**Health**	**MCL**	**Health**	**Health**	**Health**	**Health**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**Health**	**MCL**
Action Level (ug/L)[1]		**4000**	**3**	**1900**	**43000**	**1000**	**2000**	**3**	**4**	**40**	**50**	**3**	**3**	**100**	**3**	**3000**	**1**
Wells Located Outside the Slurry Wall																	
MP-207	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-208	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.53 JB	<2	<2	<2	<2	<2
MP-238AR	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.44 JB	<2	<2	<2	<2	<2
MP-241AR	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.52 JB	<2	<2	<2	<2	<2
MP-249B	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.48 JB	<2	<2	<2	<2	<2
MP-275	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.44 JB	<2	<2	<2	<2	<2
MP-276	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.47 JB	<2	<2	<2	<2	<2
MP-299B	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.60 JB	<2	<2	<2	<2	<2
MP-303B	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-304	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-304A	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.48 JB	<2	<2	<2	<2	<2
MP-305	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.53 JB	<2	<2	<2	<2	<2
MP-305A	4/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.50 JB	<2	<2	<2	<2	<2
MP-306A	4/7/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	0.72 JB	<2	<2	<2	<2	<2
Wells/Underdrains Located Inside the Slurry Wall																	
MP-202	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-219A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-222B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-224B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-246	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MP-248B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U-11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
U-12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

[1] Cleanup Standards and Action Levels are relevant to Corrective Measures Implementation (CMI) wells located outside the slurry wall.

[2] The analyte is interpreted to be non-detected because the reported concentration was less than 10x the result reported for the LCS, Field Equipment Blank and/or Trip Blank samples

B: Analyte was detected in an associated blank sample(s)

NS: Not sampled

EAGON & ASSOCIATES, INC.

100 Old Wilson Bridge Road
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Worthington, Ohio 43085
(614) 888-5760
eagoninc.com

November 30, 2020

Mr. Andrew Thompson
CECOS International, Inc.
5092 Aber Road
Williamsburg, Ohio 45176

RE: Administrative Order on Consent, O&M Progress Report No. 49
Exhibit 5 - Corrective Measures Implementation Performance Monitoring Evaluation
CECOS International, Inc. - Aber Road Facility
Docket No. V-W-024-94
EPA I.D. No. OHD 087 433 744

Dear Mr. Thompson:

Transmitted herewith is the Corrective Measures Implementation (CMI) Performance Monitoring Evaluation for CMI data collected during the October 2020 monitoring event at the closed Aber Road Facility. This evaluation is being provided to you for inclusion as Exhibit 5 of the Operation and Maintenance (O&M) Progress Report No. 49 that is to be submitted to the United States Environmental Protection Agency (U.S. EPA) by December 10, 2020.

OCTOBER 2020 MONITORING RESULTS

Compounds of Interest/Target Compound List Volatile Organic Compound Results – Inside & Outside Slurry Wall Monitoring Wells

The October 2020 monitoring event was performed in accordance with Section 5 of the July 2009 CMI O&M Manual. The event represented year twelve, quarter four of CMI monitoring as listed on Table 5.2 (Post Shutdown Monitoring Program/Groundwater Monitoring) of the CMI O&M Manual. Monitoring wells located outside the slurry wall were sampled for Compounds of Interest/Target Compound List (COI/TCL) volatile organic compounds (VOCs). Monitoring wells located outside the slurry wall are sampled semiannually in the spring and fall and locations inside the slurry wall are sampled annually in the fall.

During the October 2020 event, there were no detections of COI VOCs at or above their respective method detection limits (MDLs) in the monitoring locations outside the slurry wall. Quantified detections of some COI VOCs were detected in four (MP-202, MP-222B, MP-224B, and MP-246) of the six monitoring wells located inside the slurry wall and were within the range of historical detections at those wells. A summary of the October 2020 COI VOC results is presented on attached Table 1. Formal data validation of the October 2020 results will be included in CMI Report No. 50 due June 10, 2021.

Groundwater Cleanup Standards (GWCS) shown on Table 1 and listed in Section 5.2 of the July 2009 CMI O&M Manual continue to be achieved for the COIs at the 14 CMI wells located outside the slurry wall.

Semiannual Gradient Analysis and Elevation Differences for Nested Wells/Piezometers

Section 5.6 of the July 2009 CMI O&M Manual requires semiannual groundwater elevation measurement for a minimum of five years at six nested well pairs that straddle the slurry wall to assist in identifying hydraulic gradients across the slurry wall following shutdown of the gradient control pumping system in 2009. The initial five-year gradient monitoring period was completed as of the October 2013 event. As a result, CECOS may request U.S. EPA approval in the future to reduce the frequency of measuring groundwater elevations for gradient analysis to an annual basis.

Groundwater elevation measurements were collected for the CMI gradient analysis well network on October 5, 2020, prior to initiating the CMI groundwater sampling event. Figure 1 shows the locations of the six nested wells. As required in Section 5.7.2 of the CMI O&M Manual, gradient evaluations for the six nested wells are presented in Exhibit 2 and time-series plots depicting elevation differences for each nested pair are presented herein as Figures 2 through 7.

During the October 2020 event, well pairs #3 (880PZ-2 and MP-305A) and #4 (MP-238AR and 880PZ-3) indicated inward gradients. Well pairs #1 (USPZ-1 and MP-303B), #2 (880PZ-1 and MP-208), #5 (880PZ-4 and MP-304A), and #6 (880PZ-5 and MP-241AR) indicated outward gradients. Outward gradients have been observed at these well pairs at times during past events and conditions in October 2020 were generally consistent with gradient relationships observed since system shutdown in 2009 (Figures 2 through 7). Well pairs #1 (Figure 2) and #4 (Figure 5) display seasonal effects on gradient relationships, with inward gradients commonly occurring.

As discussed in the June 30, 2008 "Aber Road Petition to Cease Groundwater Recovery", advective groundwater flow through the slurry wall is negligible due to the low hydraulic conductivity of the bentonite wall and the fact that the Upper Sand and 880 Sand zones were removed during slurry wall construction; therefore, the presence of an outward differential at some well pairs is not expected to result in contaminant transport across the slurry wall. Semiannual monitoring of wells outside the slurry wall continues to demonstrate that COI/TCL VOCs are not being transported across the slurry wall's hydraulic barrier.

Semiannual Potentiometric Surface Maps

Section 5.6 of the July 2009 CMI O&M Manual requires monitoring wells listed in Section 5.4 of the Manual to be used in developing semiannual groundwater elevation maps both inside and outside the slurry wall. This is as specified in Condition #1 of the March 31, 2009 U.S. EPA "Final Approval with Conditions/Modifications to Shutdown the Groundwater Gradient Control System."

Potentiometric surface maps for CMI wells screened in the Upper Sand, 880 Sand, and Bedrock-Till Interface (BTI) zones in October 2020 are shown on Figures 8, 9 and 10, respectively. Groundwater flow conditions in the Upper Sand and 880 Sand were similar in nature to historical

conditions. The removal of formation material during cell construction and installation of the slurry wall as a hydraulic barrier resulted in localized isolation of the remaining interior sands. Therefore, water levels in the Upper Sand and 880 Sand in the CMI area generally do not define well organized potentiometric surfaces. Groundwater flow in the BTI, which is below the depth of the slurry wall, was toward the southwest during the event in the vicinity of the CMI area, consistent with previous observations.

COMPARISON OF SIX COI/TCL VOC RESULTS AT MP-219A, MP-246, & MP-248B TO CBPSs & SCREENING LEVELS

The June 30, 2008 *Aber Road Petition to Cease Groundwater Recovery* submittal noted six COI/TCL VOCs at wells inside the slurry wall with concentrations above the Consent Order-specified GWCSs intended to be applied at the point of compliance wells located outside the slurry wall. These compounds are 1,2-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride. The June 30, 2008 submittal contained concentration-based performance standards (CBPS) for these six parameters calculated such that if concentrations of these parameters at wells inside the slurry wall were below the CBPSs, then concentrations of these parameters in wells outside the slurry wall would remain below GWCSs for 30 years after System shutdown. The May 30, 2008 *Aber Road Petition to Cease Groundwater Recovery* (including an August 14, 2008 supplement) also developed Screening Levels (below the CBPSs) for the six COI/TCL VOCs for wells MP-219A, MP-246, and MP-248B, which are located inside the slurry wall boundary. The Screening Levels were calculated using conservative fate-and-transport assumptions such that if concentrations of these parameters at wells inside the slurry wall were below the Screening Levels, then concentrations of these parameters in wells outside the slurry wall would be expected to remain below detection for 30 years after system shutdown. The CBPSs and Screening Levels for 1,2-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride can be found in Section 5.8 of the July 2009 CMI O&M Manual.

Attached Table 2 presents a comparison of the October 2020 annual results from monitoring wells MP-219A, MP-246, and MP-248B, located inside the slurry wall, to the CBPSs and Screening Levels calculated for 1,2-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride, where detected. There were no COI/TCL VOC detections at or above respective method detection limits at MP-219A or MP-248B for the event and none of the October 2020 COI/TCL VOC concentrations for any of the three wells approached or exceeded their respective CBPSs. In addition, no Screening Levels were exceeded, with the exception of the Screening Level of 15 ug/L for 1,2-dichloroethane (1,2-DCA) that was exceeded at MP-246 (24 ug/L) in October 2020. Screening Level exceedances for 1,2-DCA at MP-246 have occurred during past events; however, concentrations have not approached the conservative CBPS of 37 ug/L since system shutdown. It is noted that the concentration of 1,2-DCA observed at MP-246 in October 2020 was within the range of recent concentrations observed at the well.

Evaluation of the Screening-Level Exceedance at MP-246

Section 5.10 of the O&M Manual requires that an evaluation of a Screening Level exceedance be completed and submitted to U.S. EPA for approval "within 30 days of receipt of validated data." The CMI data validation is not required to be completed until the reporting period following each

semiannual sampling event. Therefore, the validation for the October 2020 event will be completed by spring 2021 and presented in Progress Report No. 50 due June 10, 2021. However, we have completed our evaluation of the Screening Level exceedance for 1,2-DCA at MP-246 and have developed recommendations for additional actions moving forward.

As discussed above, the October 2020 1,2-DCA concentration of 24 ug/L at MP-246 remains below the CBPS of 37 ug/L. The result is generally consistent with 2014 (22 ug/L), 2015 (21 ug/L), 2017 (23 ug/L), 2018 (25 ug/L), and 2019 (21 ug/L) values and remains significantly below the maximum historic concentration of 1,880 ug/L. The October 2020 result is also within the range of concentrations observed since 2000 ($\leq$ 58 ug/L).

The October 2020 results at nearby Upper Sand wells located outside the slurry wall, including MP-207, MP-299B, and MP-303B (Figure 8), remain nondetect for 1,2-DCA (Table 1) and demonstrate that the slurry wall continues to provide an effective barrier to contaminant migration in the MP-246 area. The outside results together with frequent inward or flat gradients across the slurry wall indicate that the exceedance of the conservative Screening Level for 1,2-DCA at MP-246 is not reflective of an imminent potential for the Action Level of 3 ug/L or the GWCS of 5 ug/L to be exceeded beyond the slurry wall.

Another significant variable considered during the evaluation of the Screening Level exceedance was the nature of the Upper Sand in the vicinity of MP-246 and the completion and performance characteristics of MP-246, in general. The Upper Sand horizon is approximately 1.5 feet thick at the well, from 19.5 to 21 feet below ground, and the areal extent of the zone is entirely truncated by the slurry wall. During slurry wall construction, the formation was removed via trenching and was replaced with a soil-bentonite slurry barrier. The slurry wall trench was excavated to a minimum width of two-feet. The trench extended vertically, through the Upper Sand, to below the 880 Sand. In addition to this substantial hydraulic barrier to horizontal transport, MP-246 is a low-yielding well that typically purges to dryness using volumetric purging sampling methods, which demonstrates low hydraulic conductivity of the Upper Sand zone in the vicinity of the well.

The combination of the formation characteristics in the MP-246 area, common inward or nil groundwater flow potential across the slurry wall, and the limited areal extent of the zone due to its removal during slurry wall construction, minimize the likelihood that a low-level exceedance above the Screening Level will result in detections of 1,2-DCA outside the slurry wall.

In addition to the above analysis, review of the information presented in the 2008 *Petition to Cease Groundwater Recovery* indicates that a calculated value of 18 (ml/g) was used for the organic carbon partition coefficient (K_{OC}) for 1,2-DCA. Published references for actual experimental values, including supporting documentation provided in U.S. EPA's National Primary Drinking Water Regulations, indicate K_{OC} values of at least 33 for silt loam soils such as the Upper Sand zone and the soil matrix used in the slurry. Following the approach described in the petition, using a K_{OC} value of 33 for 1,2-DCA would result in a calculated Screening Level of 22 ug/L (versus 15 ug/L). The corresponding CBPS would be 54 ug/L (versus 37 ug/L) to prevent the Cleanup Standard of 5 ug/L from potentially being exceeded in 30 years. Therefore, applying the experimentally-derived K_{OC} value of 33, the October 2020 1,2-DCA result of 24 ug/L at MP-246 is marginally above the resulting

Screening Level of 22 ug/L and remains substantially below the 2008 CBPS of 37 ug/L and the recalculated or alternate CBPS of 54 ug/L.

As noted above and discussed in the 2008 petition to discontinue pumping operations, the calculated Screening Levels were developed as conservative (i.e., low-end) values for triggering additional evaluation of future results. Combined with the above discussion, it is our conclusion that no imminent potential exists for contaminant migration beyond the slurry wall based on the October 2020 sampling results.

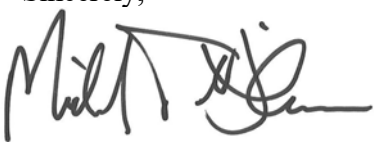
Recommended Actions Based on the Evaluation of the Screening-Level Exceedance at MP-246

Section 5.10 of the O&M Plan states: "Response actions [following a screening level exceedance] may include an upgraded monitoring program to assess and predict the possible impacts on groundwater outside the slurry wall, and/or resuming the pumping of the groundwater gradient control trench (at MP-246) and/or certain wells (at MP-219A and MP-248B)." Based on the evaluation of the single Screening Level exceedance discussed above, resumption of active gradient control operations is not warranted and no modifications to the O&M monitoring program are proposed at this time.

The next CMI performance monitoring event is scheduled for spring 2021 and will include sampling of the CMI monitoring wells located outside the slurry wall.

Please contact me at (614) 888-5760 if you have any questions.

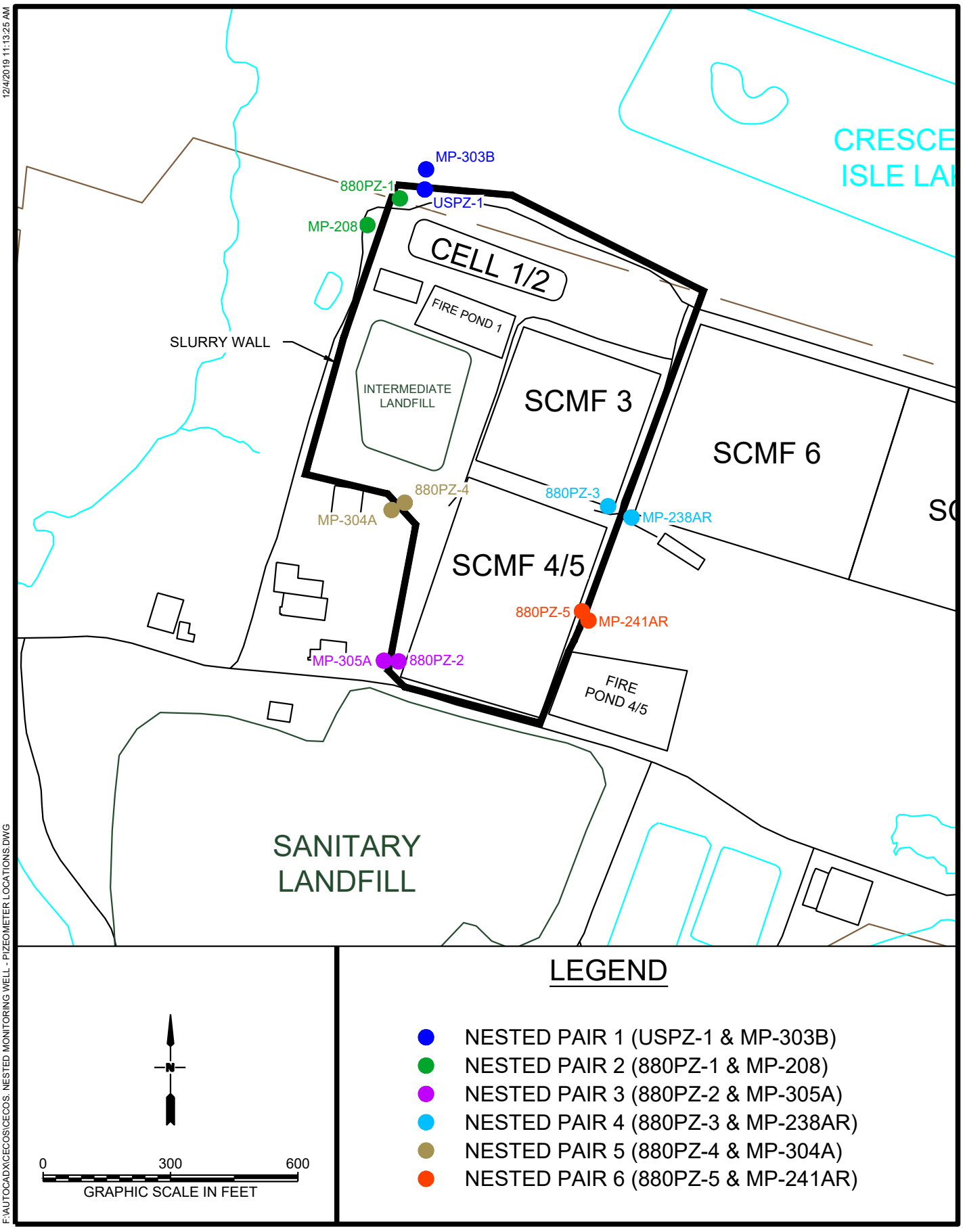
Sincerely,



Michael T. Gibson, CPG
Hydrogeologist

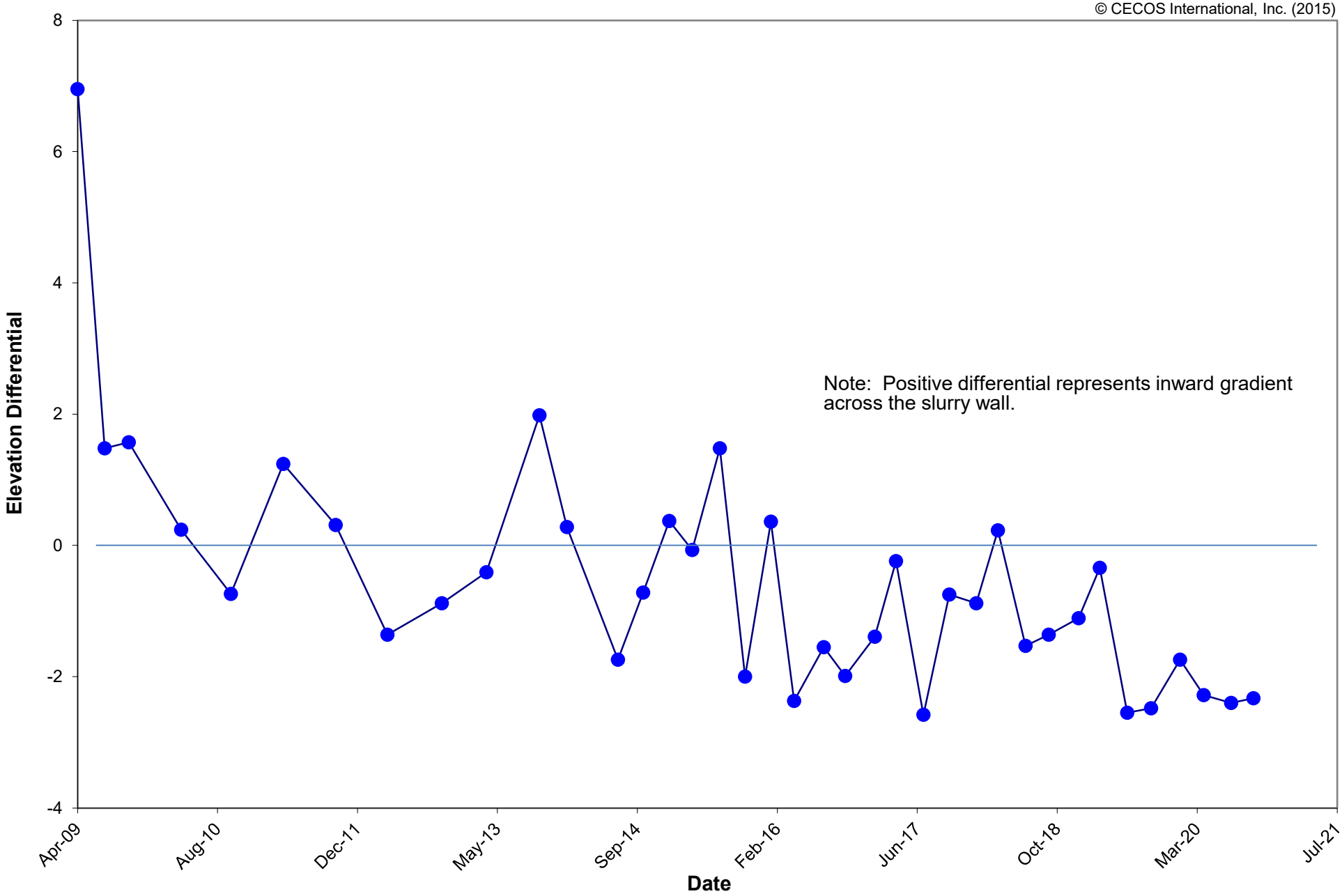
MTG/ns
encl.

FIGURES



Aber Road Facility, Williamsburg, Ohio

FIGURE 1. NESTED MONITORING WELL / PIEZOMETER LOCATIONS



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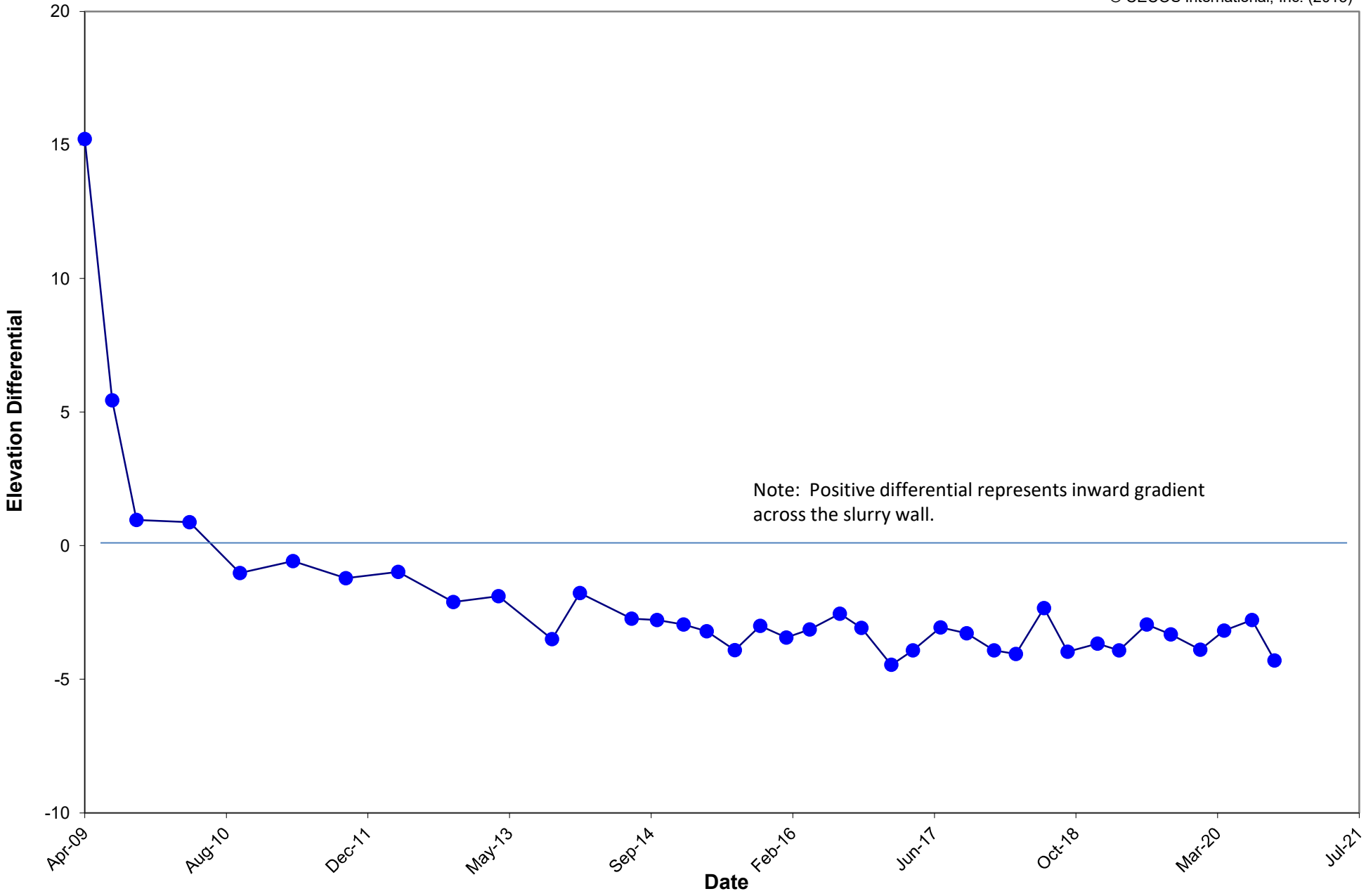
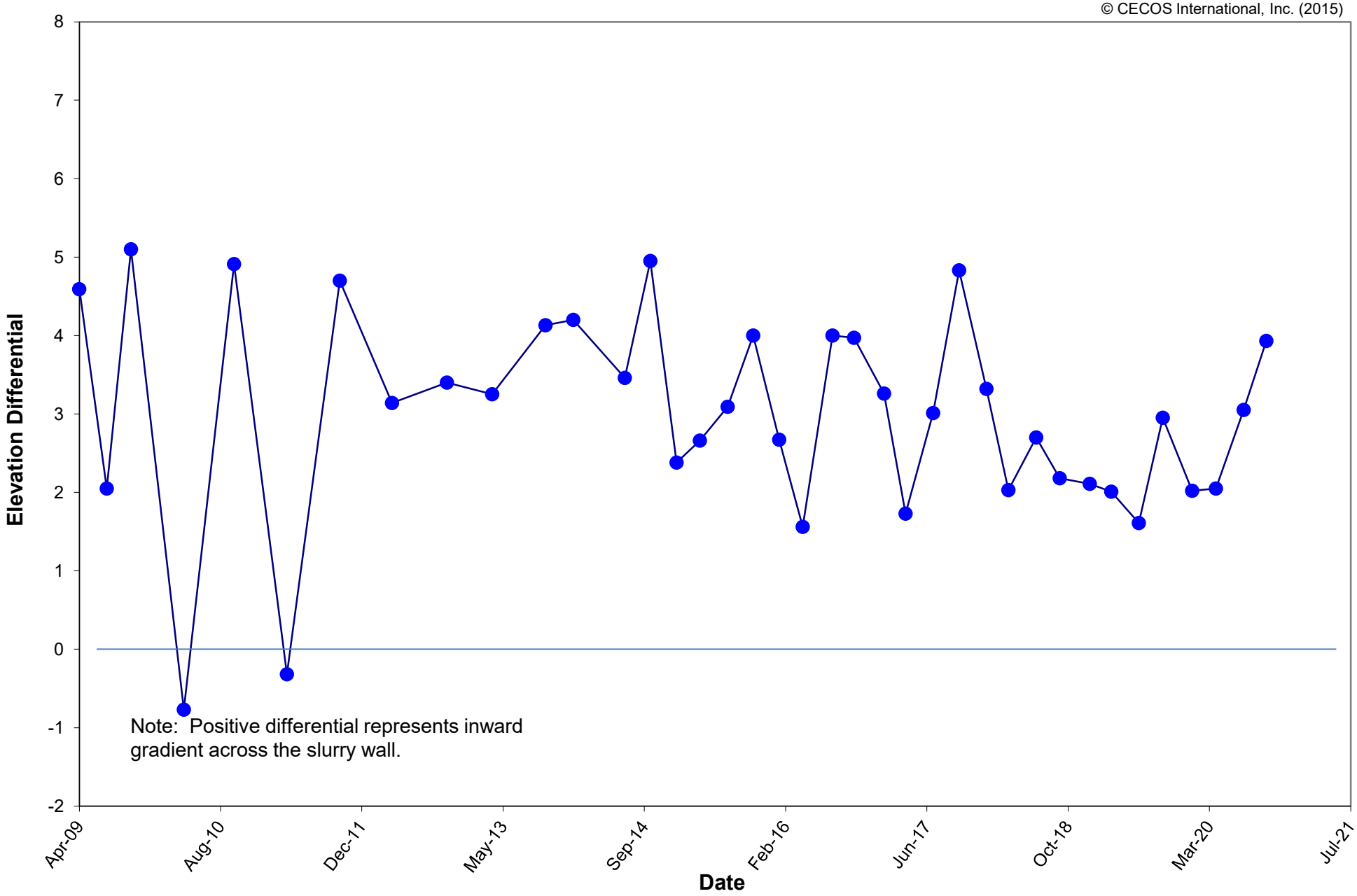
Williamsburg, Ohio

Figure 2
Elevation Differential for
Well Pair 1: MP-303B & USPZ-1



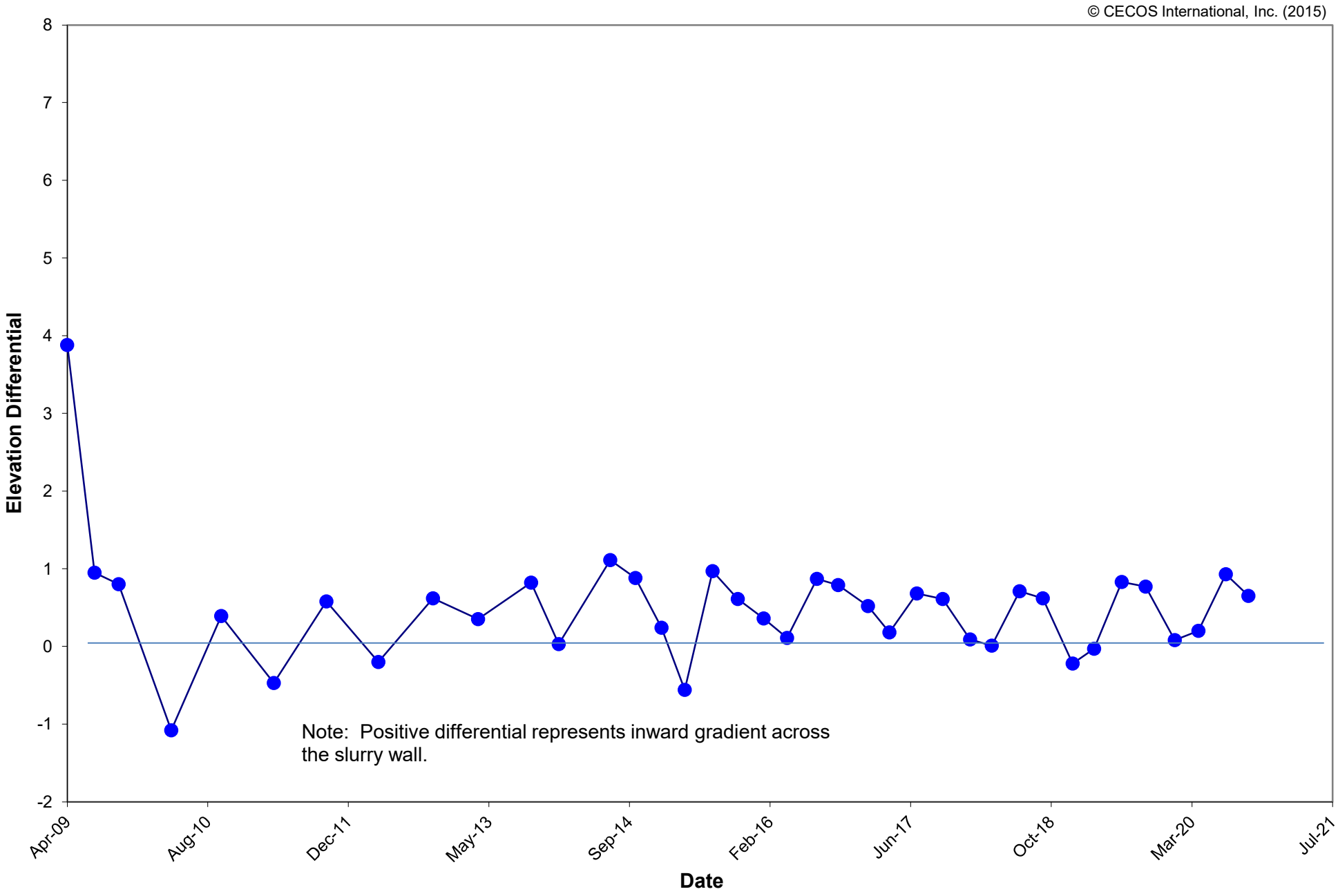
Aber Road Facility
Williamsburg, Ohio

Figure 3
Elevation Differential for
Well Pair 2: MP-208 & 880PZ-1



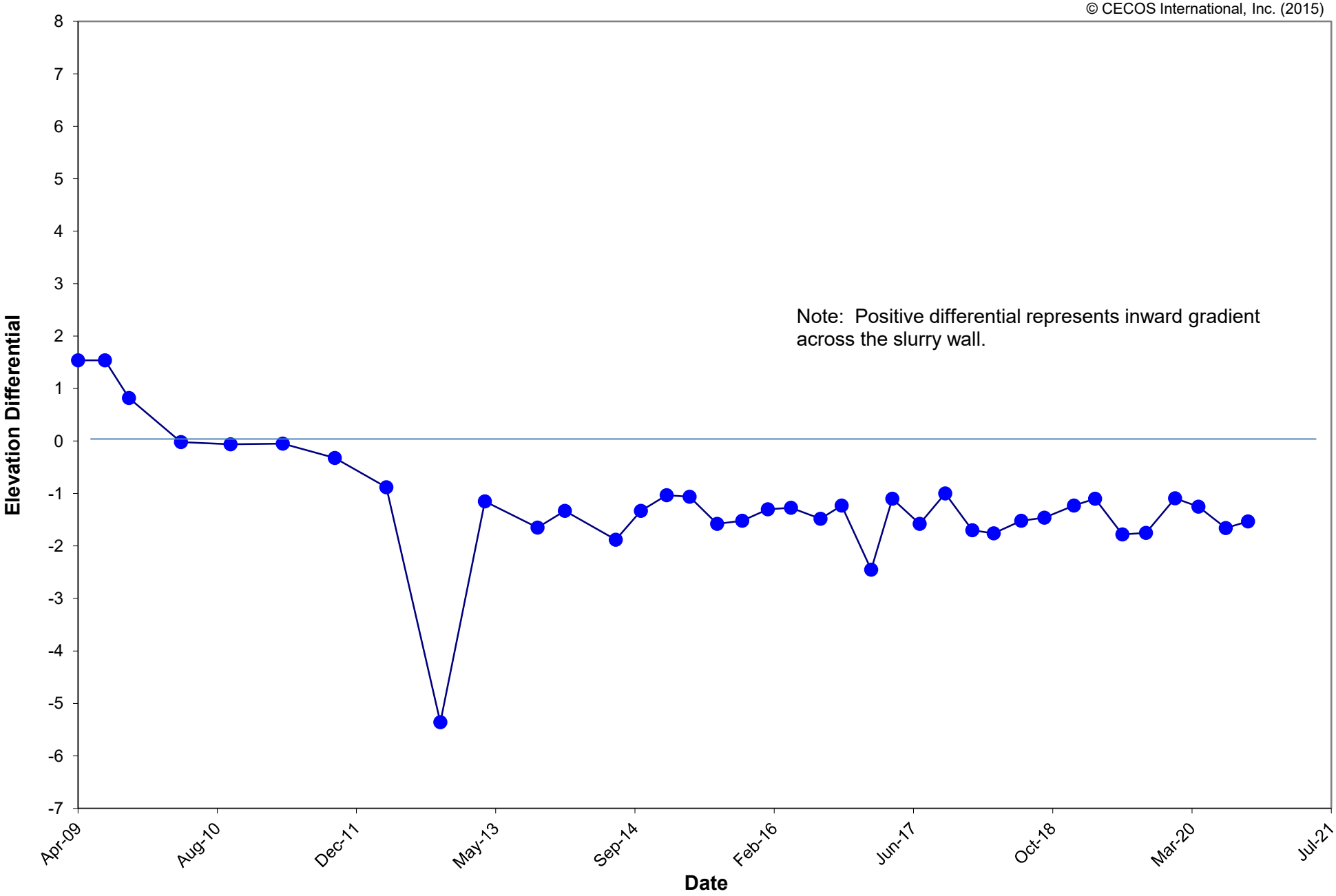
Aber Road Facility
Williamsburg, Ohio

Figure 4
Elevation Differential for
Well Pair 3: MP-305A & 880PZ-2



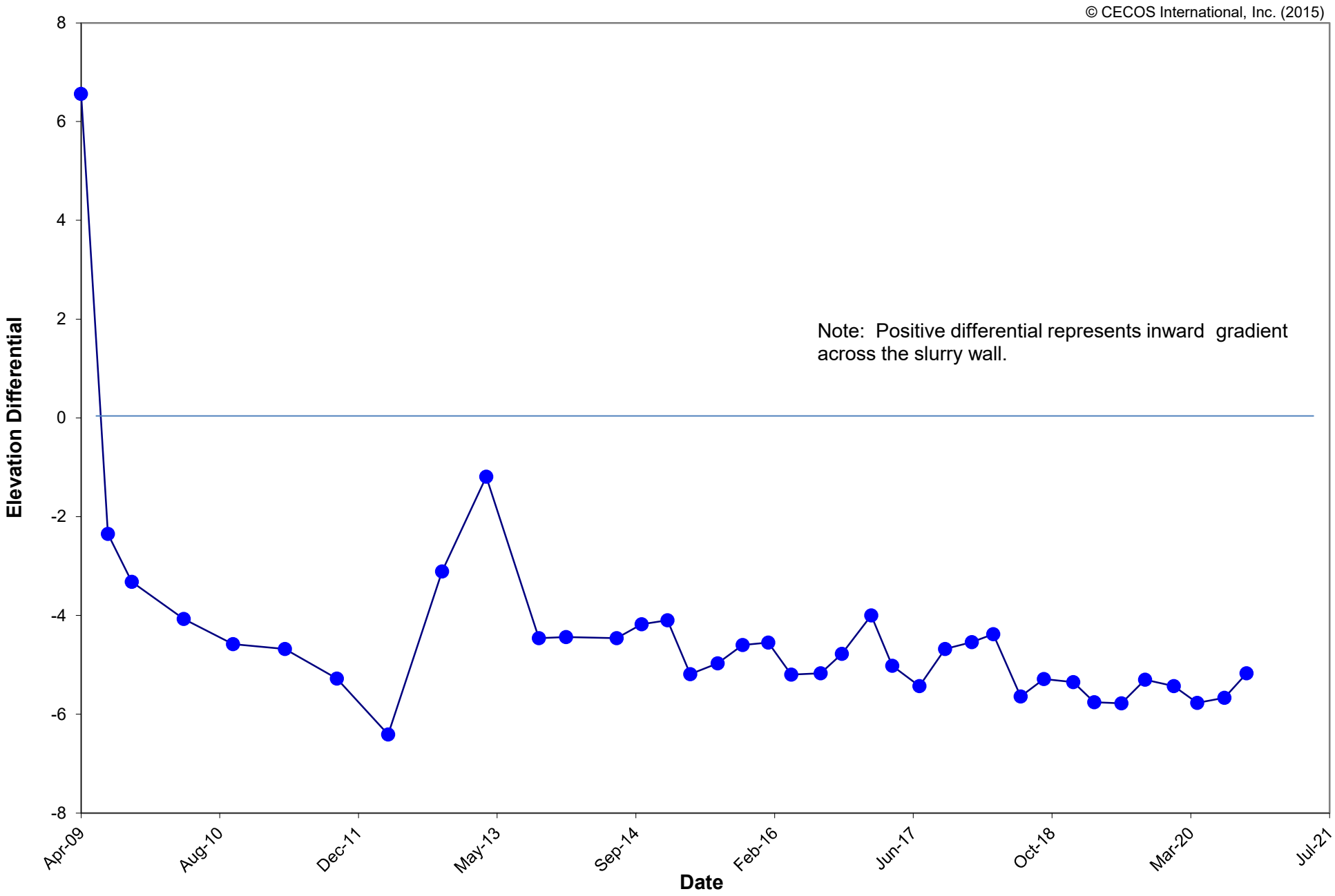
Aber Road Facility
Williamsburg, Ohio

Figure 5
Elevation Differential for
Well Pair 4: MP-238AR & 880PZ-3



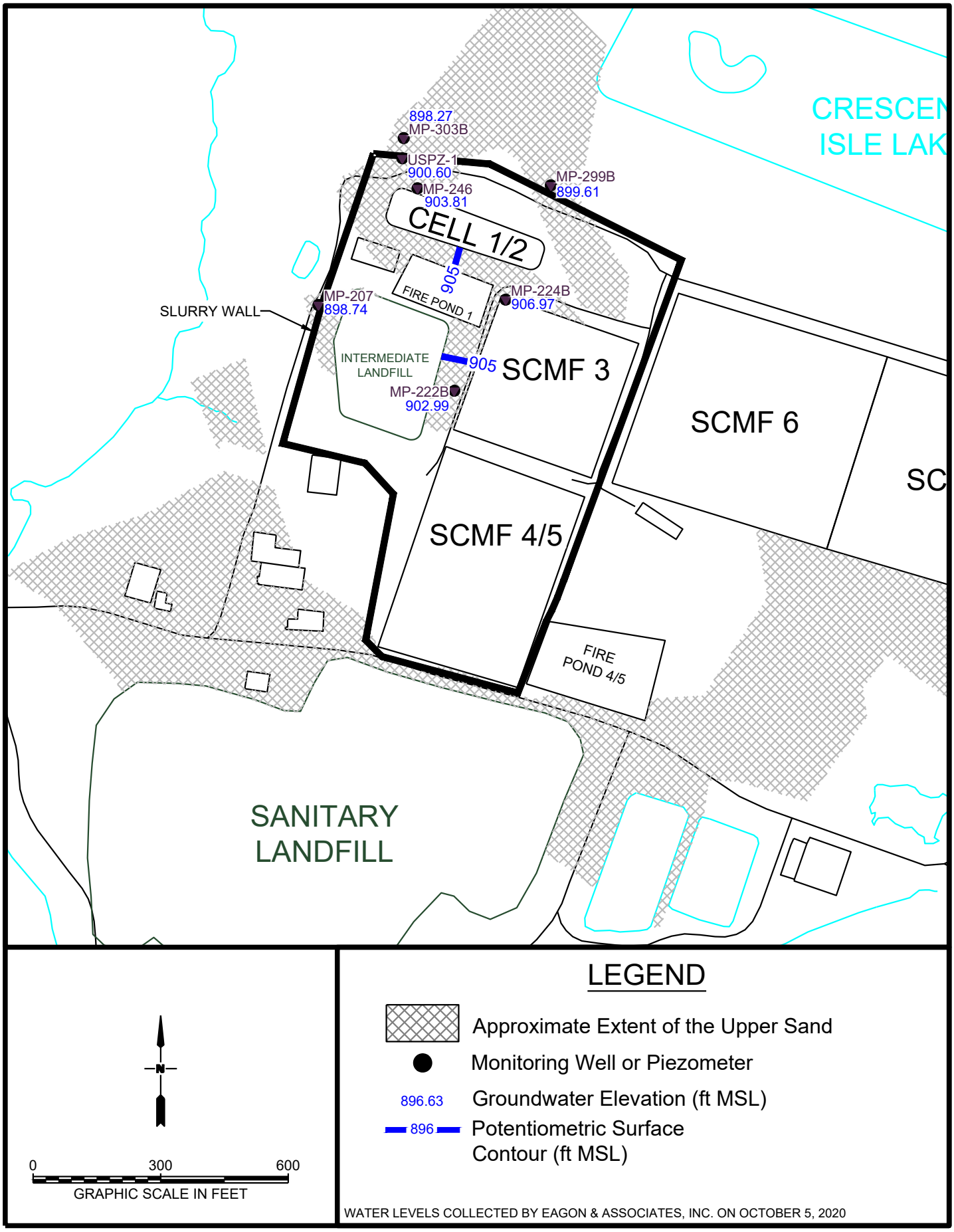
Aber Road Facility
Williamsburg, Ohio

Figure 6
Elevation Differential for
Well Pair 5: MP-304A & 880PZ-4



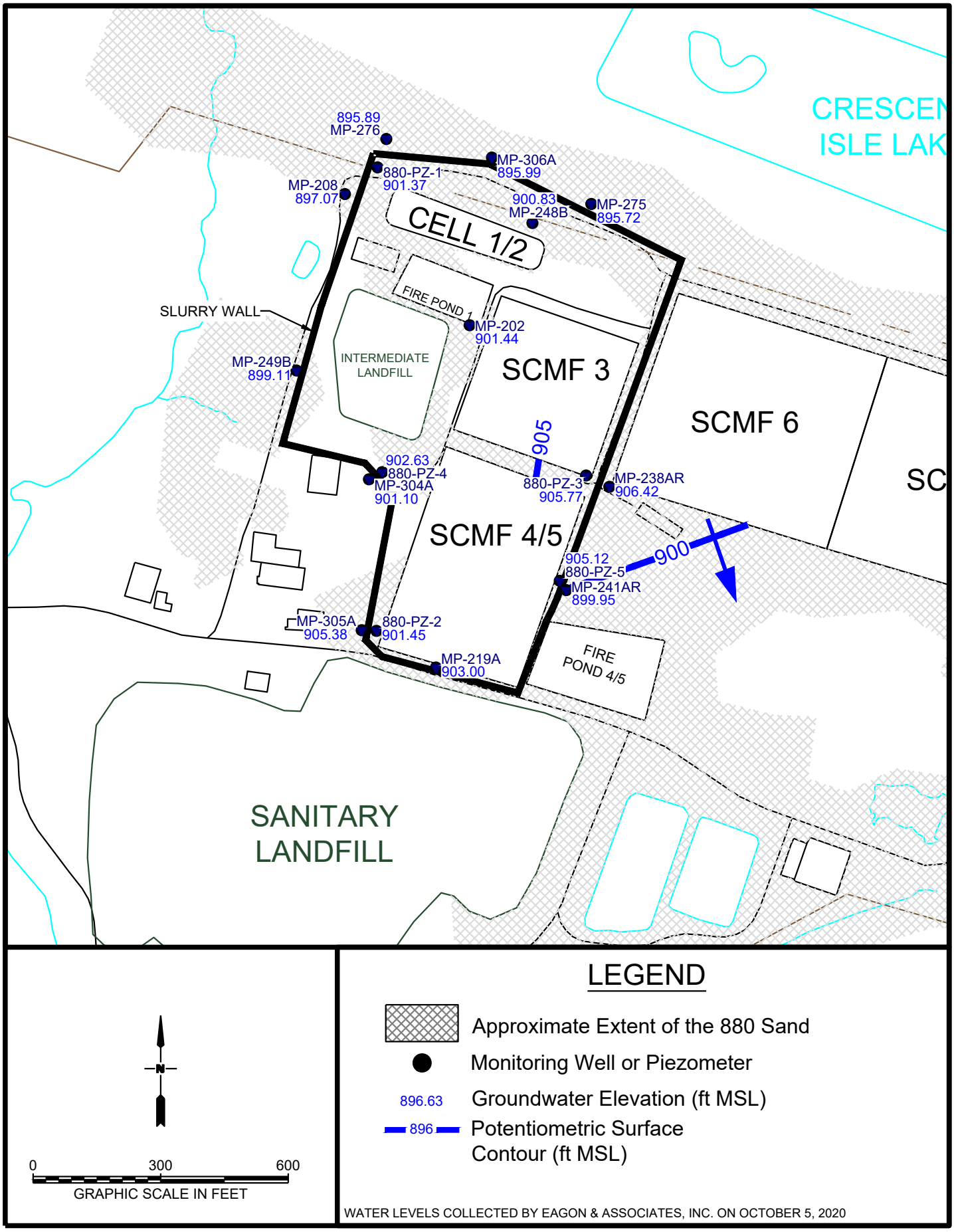
Aber Road Facility
Williamsburg, Ohio

Figure 7
Elevation Differential for
Well Pair 6: MP-241AR & 880PZ-5



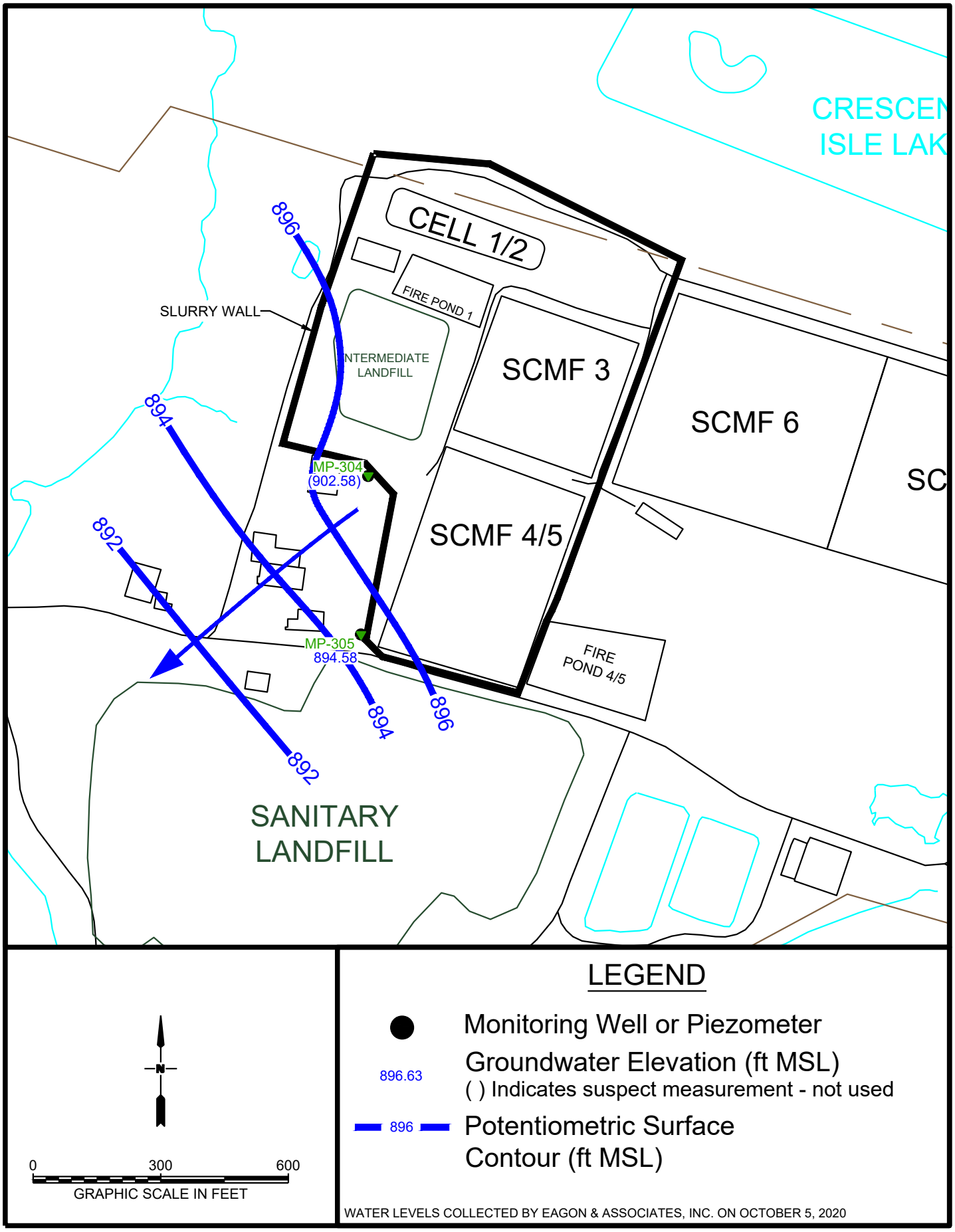
Aber Road Facility, Williamsburg, Ohio

FIGURE 8. POTENTIOMETRIC SURFACE OF THE UPPER SAND ZONE - CMI WELLS, OCTOBER 5, 2020



Aber Road Facility, Williamsburg, Ohio

FIGURE 9. POTENTIOMETRIC SURFACE OF THE 880 SAND ZONE - CMI WELLS, OCTOBER 5, 2020



Aber Road Facility, Williamsburg, Ohio

FIGURE 10. POTENTIOMETRIC SURFACE OF THE BEDROCK TILL INTERFACE - CMI WELLS, OCTOBER 5, 2020

TABLES

TABLE 1.
SUMMARY OF OCTOBER 2020 CONSTITUENT OF INTEREST (COI) RESULTS AND COMPARISON TO CLEANUP STANDARDS AND ACTION LEVELS[1]
CECOS INTERNATIONAL, INC. - ABER ROAD FACILITY

Well	Sampling Date	Acetone (ug/L)	Benzene (ug/L)	Methyl ethyl ketone (ug/L)	Chloro-ethane (ug/L)	Dichloro-difluoro-methane (ug/L)	1,1-Dichloro-ethane (ug/L)	1,2-Dichloro-ethane (ug/L)	1,1-Dichloro-ethylene (ug/L)	cis-1,2-Dichloro-ethylene (ug/L)	trans-1,2-Dichloro-ethylene (ug/L)	Methylene chloride (ug/L)	Tetra-chloro-ethylene (ug/L)	1,1,1-Trichloro-ethane (ug/L)	Trichloro-ethylene (ug/L)	Trichloro-fluoro-methane (ug/L)	Vinyl chloride (ug/L)
Cleanup Standard (ug/L)[1]		**10000**	**5**	**61000**	**292000**	**20000**	**10000**	**5**	**7**	**70**	**100**	**5**	**5**	**200**	**5**	**31000**	**2**
Basis		**Health**	**MCL**	**Health**	**Health**	**Health**	**Health**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**MCL**	**Health**	**MCL**
Action Level (ug/L)[1]		**4000**	**3**	**1900**	**43000**	**1000**	**2000**	**3**	**4**	**40**	**50**	**3**	**3**	**100**	**3**	**3000**	**1**
Wells Located Outside the Slurry Wall																	
MP-207	10/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-208	10/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-238AR	10/5/2020	<10/<10	<2/<2	<10/<10	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2
MP-241AR	10/5/2020	<10/<10	<2/<2	<10/<10	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2
MP-249B	10/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-275	10/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-276	10/5/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-299B	10/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-303B	10/5/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-304	10/5/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-304A	10/5/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-305	10/5/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-305A	10/5/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-306A	10/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Wells/Underdrains Located Inside the Slurry Wall																	
MP-202	10/6/2020	<10/<10	**0.44 J/0.42 J**	<10/<10	<2/<2	<2/<2	**3.1/3.0**	**2.1/2.0**	<2/<2	**1.2 J/1.1 J**	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2	<2/<2
MP-219A	10/6/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-222B	10/6/2020	<10	**1.9 J**	<10	**1.2 J**	**4.4**	**3.1**	**22**	<2	**2.2**	<2	<2	<2	<2	<2	<2	<2
MP-224B	10/6/2020	<10	<2	<10	<2	<2	**1.4 J**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
MP-246	10/6/2020	<10	**1.0 J**	<10	**3.1**	<2	**74**	**24**	**12**	**15**	<2	<2	**130**	**15**	**21**	**1.6 J**	**3.1**
MP-248B	10/5/2020	<10	<2	<10	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
U-11	10/6/2020	<10	<2	<10	<2	<2	**0.83 J**	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
U-12	10/6/2020	<10	<2	**3.3 J**	<2	<2	**0.63 J**	<2	<2	**9.8**	<2	<2	<2	<2	<2	<2	**1.3 J**

[1] Cleanup Standards and Action Levels are relevant to Corrective Measures Implementation (CMI) wells located outside the slurry wall.

J: Estimated results between the method detection limit (MDL) and reporting limit.

<10/<10: result/duplicate result.

MP-246 was initially diluted two times, the sample was reanalyzed without dilutions. Both results were reported. (e.g. <10/<20: not diluted result/diluted result).

TABLE 2.
CMI COI COMPOUND DETECTIONS AT MP-246, MP-219A, AND MP-248B
OCTOBER 2020 MONITORING EVENT
CECOS INTERNATIONAL, INC. ABER ROAD FACILITY

Well	Constituent of Interest (COI)	Result (ug/L)	Concentration-Based Performance Standards (CBPS) (ug/L)	Screening Level (ug/L)
MP-219A	No detections	NA	NA	NA
MP-246	1,1,1-Trichloroethane	15	130,000	1,350
	1,1-Dichloroethylene	12	213	62
	1,2-Dichloroethane	24	37	15
	Tetrachloroethylene	130	60,000,000	30,000,000
	Trichloroethylene	21	1,200	500
	Vinyl chloride	3.1	9	9
MP-248B	No detections	NA	NA	NA

Notes:

Per the July 13, 2009 CMI Operations and Maintenance Manual, results for wells MP-246, MP-219A, and MP-248B are to be compared to calculated CBPS and Screening Levels for six COI compounds (1,2-dichloroethane, 1,1-dichloroethylene, tetrachloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride). Results not listed are non-detect (<MDL).

MP-219A and MP-248B had no detections of COIs above the MDL during the October 2020 event.

SECTION I
PART B

2020 TSCA Groundwater Monitoring Analytical Results

- **DMP Monitoring Wells**
- **CMI Performance Monitoring Wells**

2020 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

WELLS

April 2020

Well	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
MP-206AR	6.92	2687	1	ND
MP-207	6.9	2176	ND	ND
MP-208	7.44	1274	ND	ND
MP-210AR	6.97	871	1.3	ND
MP-211BR	7.29	796	ND	ND
MP-213A	6.44	2053	1.9	ND
MP-214BR	6.89	1794	1.4	ND
MP-228R	7.39	1890	ND	ND
MP-228AR	7.05	985	1.2	ND
MP-230A	7.04	1132	1	ND
MP-231AR	7.19	2710	ND	ND
MP-232A	6.86	1327	1.8	ND
MP-233AR	7.04	1297	2.3	ND
MP-233R	7.42	1811	6	ND
MP-234AR	6.94	2344	1.3	ND
MP-234R	7.35	2285	ND	ND
MP-235BR	7.15	1665	ND	ND
MP-235CR	7.17	1578	ND	ND
MP-235R	7.38	1257	ND	ND
MP-237	7.49	1016	ND	ND
MP-238AR	7.42	864	ND	ND
MP-238R	7.04	1819	1.1	ND
MP-241AR	6.87	2170	1.5	ND
MP-241R	8.24	834	ND	ND
MP-244ARR	7.23	1131	1	ND
MP-244R	7.47	1264	ND	ND
MP-249B	7.24	2540	1	ND
MP-250	7.32	892	ND	ND
MP-250A	7.32	892	ND	ND
MP-251A	7.24	779	1	ND

Well	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
MP-274	7.54	1088	2.2	ND
MP-274A	6.73	1419	1.1	ND
MP-275	7.1	956	1.4	ND
MP-276	7.19	1496	2.8	ND
MP-277A	6.68	1413	1.3	ND
MP-279	7.01	7990	1.9	ND
MP-280	7.51	980	14.9	ND
MP-280A	6.81	1318	ND	ND
MP-281	7.72	1241	2.9	ND
MP-281C	7.06	954	ND	ND
MP-286C	7.45	1019	1.2	ND
MP-299B	7.25	755	1.1	ND
MP-303B	7.62	811	ND	ND
MP-304	7.73	604	1.6	ND
MP-304A	7.07	3670	1.3	ND
MP-305	7.29	1046	ND	ND
MP-305A	7.69	442	2.5	ND
MP-306A	7.63	937	13	ND
MP-401A	7.03	1248	1.9	ND
MP-401B	7.17	1238	ND	ND
MP-402A	6.74	723	3.9	ND
MP-403A	7.03	1782	1.1	ND
MP-404	7.26	1488	7.5	ND
MP-404A	7.11	1012	ND	ND
MP-405A	6.97	1151	2.2	ND
MP-406C	7.25	898	ND	ND
MP-407	7.39	1786	2.6	ND
MP-408	7.06	3350	29	ND
MP-409	7.31	808	2.5	ND

Note: ND means not detected above PQL.
The TOC reporting limit was 1 mg/L for the 2020 GW sampling events.
The PCB reporting limit was 0.5 ug/L for the 2020 GW sampling events.

2020 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

WELLS

October 2020

Well	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
MP-202	6.37	4551	5.9	ND
MP-206AR	6.54	3513	1.2	ND
MP-207	6.67	2721	1.4	ND
MP-208	6.89	1821	1.3	ND
MP-210AR	7.46	985	1.4	ND
MP-211BR	7.08	1159	1	ND
MP-213A	6.58	2905	2	ND
MP-214BR	6.99	2530	2.1	ND
MP-219A	6.86	1339	1.6	ND
MP-222B	6.45	6870	5.2	ND
MP-224B	6.98	1187	1.2	ND
MP-228R	7.46	2089	1	ND
MP-228AR	7.05	1285	1.7	ND
MP-230A	7.08	1257	1.3	ND
MP-231AR	7.05	3632	ND	ND
MP-232A	7.07	1457	2.2	ND
MP-233AR	7.11	1562	2.8	ND
MP-233R	7.46	2111	6.7	ND
MP-234AR	6.83	2924.6	1.5	ND
MP-235BR	7.04	1932.4	ND	ND
MP-235CR	6.9	1854	ND	ND
MP-235R	7.38	1882	ND	ND
MP-237	7.69	1276	ND	ND
MP-238AR	6.83	2133	1.4	ND
MP-238R	7.46	968	ND	ND
MP-241AR	6.61	2696	1.7	ND
MP-241R	7.76	1048	ND	ND
MP-244ARR	7.12	1290	ND	ND
MP-244R	7.74	1370	ND	ND
MP-246	6.67	1301	1.8	ND
MP-248B	7	2370	9.3	ND
MP-249B	6.79	3064	1.7	ND

Well	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
MP-250	7.31	990	ND	ND
MP-250A	7.17	1370	ND	ND
MP-251A	7.65	1016	1.3	ND
MP-274	7.55	1230	2.2	ND
MP-274A	7	1480	ND	ND
MP-275	7.1	1171	1.8	ND
MP-276	6.88	1767	3.2	ND
MP-277A	6.98	1613	1.3	ND
MP-279	7	9314	2.2	ND
MP-280	7.55	1508	14.8	ND
MP-280A	6.92	1482	1.5	ND
MP-281	7.28	1530	2.9	ND
MP-281C	7.14	1200	ND	ND
MP-286C	7.41	1150	1.3	ND
MP-299B	7.11	931	1.3	ND
MP-303B	7.42	952	1.2	ND
MP-304	7.59	495	5.8	ND
MP-304A	6.77	4139	1.6	ND
MP-305	7.08	1247	ND	ND
MP-305A	7.63	660	4.2	ND
MP-306A	7.35	1068	13.1	ND
MP-401A	6.74	1743	1.8	ND
MP-401B	6.96	1577	ND	ND
MP-402A	6.93	1125	4.9	ND
MP-403A	7.03	2323	1.5	ND
MP-404	7.32	1685	8.1	ND
MP-404A	7.42	1171	1.1	ND
MP-405A	6.87	2238	2.4	ND
MP-406C	7.2	1161	ND	ND
MP-407	7.34	2307	3.1	ND
MP-408	7.18	3957	28.5	ND
MP-409	7.35	974	2.6	ND

Note: ND means not detected above PQL.

The TOC reporting limit was 1 mg/L for the 2020 GW sampling events.

The PCB reporting limit was 0.5 ug/L for the 2020 GW sampling events.

SECTION I
PART C

2020 TSCA Monitoring Analytical Results

- **Streams**
- **Underdrains**
- **Leak Detectors**
- **Leachate Treatment System Effluent**

2020 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Surface Locations

January 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER SURFACE LOCATION C-2	6.79	259	12.8	ND
ABER SURFACE LOCATION C-6	5.99	319	12	ND
ABER SURFACE LOCATION C-9	6.09	240	13	ND
ABER SURFACE LOCATION C-10	5.72	257	12.9	ND
ABER SURFACE LOCATION C-12	7.2	395	8.1	ND

April 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER SURFACE LOCATION C-2	6.13	553	10.2	ND
ABER SURFACE LOCATION C-6	6.44	573	9.1	ND
ABER SURFACE LOCATION C-9	6	550	10.4	ND
ABER SURFACE LOCATION C-10	6.17	549	9.7	ND
ABER SURFACE LOCATION C-12	7.54	598	4.3	ND

July 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER SURFACE LOCATION C-2	7.43	591	5.1	ND
ABER SURFACE LOCATION C-6	7.02	470	5.9	ND
ABER SURFACE LOCATION C-9	7.73	1033	3.1	ND
ABER SURFACE LOCATION C-10	7.14	565	5.6	ND
ABER SURFACE LOCATION C-12	NS	NS	NS	NS

October 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER SURFACE LOCATION C-2	NS	NS	NS	NS
ABER SURFACE LOCATION C-6	NS	NS	NS	NS
ABER SURFACE LOCATION C-9	NS	NS	NS	NS
ABER SURFACE LOCATION C-10	NS	NS	NS	NS
ABER SURFACE LOCATION C-12	NS	NS	NS	NS

Notes:
NS means location dry; no sample collected
ND means not detected above PQL.
The TOC reporting limit was 1 mg/L for the 2020 SW sampling events.
The PCB reporting limit was 0.5 ug/L for the 2020 SW sampling events.

2020 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Underdrains

January 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
U-3	6.75	1,239	4.1	ND
U-4	7.15	1,201	4.6	ND
U-5	7.09	1,063	3.8	ND
U-6	6.98	1,229	3.7	ND
U-10	7.55	734	6	ND
U-11	7.11	1,645	3.1	ND
U-12	7.1	1,026	2.6	ND
U-13	7.41	857	2.8	ND
U-14	7.88	831	2.5	ND
U-15	6.47	1,936	2.2	ND
U-16	6.48	2,390	2.4	ND
U-17	7.21	1,281	1.8	ND
U-18	6.33	1,373	2.4	ND
U-19	6.77	1,243	1.9	ND
U-20	6.92	1,563	1.7	ND
U-21	7.5	1,068	2.7	ND
U-21A	6.58	941	2.8	ND
U-22	7.07	1,669	4.2	ND
U-22A	6.96	1,686	4.5	ND
U-23	6.68	960	3.5	ND
U-24	6.7	1,682	5.4	ND
U-25	6.92	1,455	4.2	ND
U-26	6.92	1,647	6	ND

Note: ND means not detected above PQL; NS means no sample collected.
The TOC reporting was 1 mg/L in 2020.
The PCB reporting limit was 0.5 ug/L in 2020.

2020 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Underdrains

April 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
U-3	6.34	1151	3	ND
U-4	6.65	956	3.2	ND
U-5	6.36	1132	3.1	ND
U-6	6.91	1093	3.2	ND
U-10	6.65	763	6.9	ND
U-11	6.5	1148	1.6	ND
U-12	6.64	1031	2	ND
U-13	6.77	861	1.6	ND
U-14	6.65	907	1.4	ND
U-15	6.85	1700	1.9	ND
U-16	6.83	1612	2.5	ND
U-17	7.34	1005	1.3	ND
U-18	7.17	1271	2.5	ND
U-19	7.92	954	1.5	ND
U-20	7.64	1332	1.4	ND
U-21	7.6	977	1.6	ND
U-21A	7.36	944	1.9	ND
U-22	6.45	1527	3.8	ND
U-22A	6.43	1655	4.6	ND
U-23	6.68	904	3.1	ND
U-24	6.41	1504	5.1	ND
U-25	6.68	1270	2.9	ND
U-26	6.52	1610	4.7	ND

Note: ND means not detected above PQL; NS means no sample collected.
The TOC reporting was 1 mg/L in 2020.
The PCB reporting limit was 0.5 ug/L in 2020.

2020 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Underdrains

July 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
U-3	6.69	970	3.1	ND
U-4	7.08	852	2.8	ND
U-5	6.67	1412	2.7	ND
U-6	6.88	866	2.7	ND
U-10	7.41	663	5.4	ND
U-11	6.44	1032	2.3	ND
U-12	7.05	916	2.4	ND
U-13	7.34	816	1.8	ND
U-14	7.3	784	1.7	ND
U-15	6.54	1996	2.2	ND
U-16	6.73	1559	2.6	ND
U-17	7.41	1013	1.5	ND
U-18	6.99	1227	2.6	ND
U-19	7.59	914	1.9	ND
U-20	7.4	1331	1.7	ND
U-21	7.59	867	2.1	ND
U-21A	7.46	820	2.5	ND
U-22	6.79	1359	4.4	ND
U-22A	6.91	1410	5	ND
U-23	7.13	814	2.8	ND
U-24	6.65	1328	3.9	ND
U-25	6.86	1043	2.7	ND
U-26	6.67	1213	4.1	ND

Note: ND means not detected above PQL; NS means no sample collected.
The TOC reporting was 1 mg/L in 2020.
The PCB reporting limit was 0.5 ug/L in 2020.

2020 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Underdrains

October 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
U-3	7.05	1432	3.5	ND
U-4	7.14	1375	3.7	ND
U-5	7.09	1549	3.9	ND
U-6	7.11	1541	3.8	ND
U-10	7.41	921.3	5.9	ND
U-11	7.04	1459	2.1	ND
U-12	7.09	1270	2.2	ND
U-13	7.28	1317	1.6	ND
U-14	7.3	1180	1.6	ND
U-15	6.95	2430	2.2	ND
U-16	6.98	2740	2.4	ND
U-17	7.21	2110	1.5	ND
U-18	7.33	1751	2.6	ND
U-19	7.49	1380	1.7	ND
U-20	7.46	1829	1.8	ND
U-21	7.45	1205	2.1	ND
U-21A	7.47	1216	2.6	ND
U-22	7.06	2170	4.2	ND
U-22A	7.01	2160	4.7	ND
U-23	7.19	1186	3.7	ND
U-24	6.73	2110	5.5	ND
U-25	6.14	1802	3.7	ND
U-26	6.87	2090	5.8	ND

Note: ND means not detected above PQL; NS means no sample collected.
The TOC reporting was 1 mg/L in 2020.
The PCB reporting limit was 0.5 ug/L in 2020.

2020 TSCA REPORT
CECOS ABER ROAD, WILLIAMSBURG, OHIO
ANALYTICAL RESULTS

Leak Detectors

January 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER LEAK DETECTION LD-1	6.11	2,050	15.7	ND
ABER LEAK DETECTION LD-2	6.26	1,696	9.7	ND
ABER LEAK DETECTION LD-3	6.99	1,584	4.1	ND
ABER LEAK DETECTION LD-4	6.8	1,478	3.8	ND

April 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER LEAK DETECTION LD-1	6.1	1838	16.1	ND
ABER LEAK DETECTION LD-2	6.03	1424	5.4	ND
ABER LEAK DETECTION LD-3	7.01	1401	2.9	ND
ABER LEAK DETECTION LD-4	6.36	1328	2.7	ND

July 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER LEAK DETECTION LD-1	6.03	1458	11	ND
ABER LEAK DETECTION LD-2	6.09	1347	7.9	ND
ABER LEAK DETECTION LD-3	6.8	1144	2.6	ND
ABER LEAK DETECTION LD-4	6.7	1056	2.5	ND

October 2020

Location	pH (SU)	SC (µmhos/cm)	TOC (mg/L)	PCBs (ug/L)
ABER LEAK DETECTION LD-1	6.39	2926	15.9	ND
ABER LEAK DETECTION LD-2	6.61	1944	11.8	ND
ABER LEAK DETECTION LD-3	6.94	2100	3.7	ND
ABER LEAK DETECTION LD-4	6.9	1974	3.4	ND

Note: ND means not detected.
The TOC reporting limit was 1 mg/L in 2020.
The PCB reporting limit was 0.5 ug/L in 2020.

CECOS, ABER ROAD LEACHATE TREATMENT SYSTEM EFFLUENT RESULTS
July 13, 2020

Parameter	Units	Result
Aroclor-1016	ug/L	<2.5
Aroclor-1221	ug/L	<2.5
Aroclor-1232	ug/L	<2.5
Aroclor-1242	ug/L	32
Aroclor-1248	ug/L	<2.5
Aroclor-1254	ug/L	<2.5
Aroclor-1260	ug/L	40
TOC	mg/L	1,140
pH	S.U.	9.06
Specific Conductance	µmhos/cm	28,700

SECTION II
LEACHATE VOLUMES PRODUCED AT EACH TSCA SUBCELL

Leachate from TSCA Subcells
CECOS, Aber Road Facility
January - December 2020

Standpipe Location	SCMF Number	Gallons Produced In 2020
L-4	3	3,014
L-5	3	6,150
L-6	4&5	4,207
L-7	4&5	7,924
L-10	6	15,184
L-11	6	4,583
L-14	6	1,537
L-15	7	8,928
L-16	7	12,170
L-17	7	29,505
L-18	7	12,124
L-20	8	13,779
L-21/22	8	11,375
L-26	9	4,593
L-27	9	6,676
L-35	10	72,813
L-36	10	40,136
	2020 TOTAL	**254,697**

SECTION III

POTENTIOMETRIC SURFACE DATA and MAPS

April 2020 Water Level Data

TABLES

TABLE 1A.
MEASURED WATER LEVELS IN THE UPPER SAND ZONE
APRIL 6, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-203A	PZ	928.74	11:27	18.42	910.32	
MP-203C	PZ	927.60	11:22	17.22	910.38	
MP-205C	PZ	915.36	10:41	8.18	907.18	
MP-205D	PZ	915.73	10:39	5.59	910.14	
MP-206AR	MW	916.73	10:26	7.90	908.83	
MP-207	MW	906.54	11:35	6.64	899.90	
MP-212A	PZ	913.30	11:34	4.98	908.32	
MP-215A	MW	909.11	12:21	13.69	895.42	
MP-220AR	PZ	910.10	11:29	5.34	904.76	
MP-222B	MW	910.09	10:15	5.81	904.28	
MP-224B	MW	913.83	09:59	4.63	909.20	
MP-231AR	MW	915.73	10:59	9.65	906.08	
MP-235AR	PZ	913.53	10:05	6.21	907.32	
MP-235CR	MW	914.66	10:03	11.75	902.91	
MP-239B	MW	915.58	10:37	7.39	908.19	
MP-244ARR	MW	909.82	11:12	14.35	895.47	
MP-246	MW	908.59	09:34	3.22	905.37	
MP-253A	PZ	900.34	09:06	8.38	891.96	
MP-255A	PZ	910.82	10:48	3.88	906.94	
MP-268	PZ	910.12	10:14	6.63	903.49	
MP-277B	PZ	915.56	10:34	3.62	911.94	
MP-284B	PZ	913.31	10:12	2.02	911.29	
MP-285B	PZ	915.27	10:29	4.80	910.47	
MP-290B	MW	898.71	09:12	6.93	891.78	
MP-299B	PZ	911.62	09:49	5.40	906.22	
MP-301B	PZ	907.90	09:32	5.70	902.20	
MP-303B	MW	906.24	09:27	4.92	901.32	
MP-401A	MW	906.37	10:47	10.81	895.56	
MP-402A	MW	908.42	09:50	5.20	903.22	
MP-403A	MW	912.37	11:59	8.11	904.26	
MP-404A	MW	915.09	09:21	10.07	905.02	
MP-405A	MW	911.02	09:42	4.66	906.36	
P-505A	PZ	915.97	19:44	7.84	908.13	
USPZ-1	PZ	908.00	09:30	4.40	903.60	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1B.
MEASURED WATER LEVELS IN THE 880 SAND ZONE
APRIL 6, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
880-PZ1	PZ	908.49	09:19	5.56	902.93	
880-PZ2	PZ	907.11	11:26	3.85	903.26	
880-PZ3	PZ	915.45	10:31	9.55	905.90	
880-PZ4	PZ	909.45	10:58	5.86	903.59	
880-PZ5	PZ	914.42	10:38	8.70	905.72	
M-06	PZ	932.75	10:20	8.42	924.33	
M-25	PZ	913.32	11:19	8.88	904.44	
MP-200R	PZ	913.79	11:17	15.05	898.74	
MP-201	PZ	909.86	10:54	5.41	904.45	
MP-202	MW	911.89	10:09	8.19	903.70	
MP-203R	PZ	927.77	11:24	17.39	910.38	
MP-204A	PZ	917.16	11:04	6.69	910.47	
MP-205BR	PZ	914.62	10:44	5.87	908.75	
MP-206	PZ	915.99	10:22	6.68	909.31	
MP-206CR	PZ	915.31	10:24	6.01	909.30	
MP-208	MW	907.57	09:15	7.82	899.75	
MP-210AR	MW	912.83	10:17	3.85	908.98	
MP-211BR	MW	911.09	10:04	6.77	904.32	
MP-212D	PZ	912.48	11:33	3.80	908.68	
MP-213A	MW	912.98	09:53	17.88	895.10	
MP-214BR	MW	910.29	11:56	15.94	894.35	
MP-216BR	MW	911.36	12:31	14.25	897.11	
MP-217A	PZ	914.14	09:36	17.15	896.99	
MP-217B	PZ	914.24	09:35	17.22	897.02	
MP-219A	MW	912.34	11:19	7.46	904.88	
MP-223AR	PZ	910.63	10:06	7.18	903.45	
MP-227AR	PZ	912.12	10:31	14.74	897.38	
MP-228AR	MW	911.64	10:26	14.43	897.21	
MP-228B	PZ	911.34	10:25	14.09	897.25	
MP-229B	PZ	910.63	10:20	13.33	897.30	
MP-230A	MW	908.75	10:17	12.93	895.82	
MP-232A	MW	909.75	10:13	14.42	895.33	
MP-233AR	MW	907.44	09:45	5.80	901.64	
MP-234AR	MW	910.90	09:55	8.10	902.80	
MP-235BR	MW	914.50	10:04	15.02	899.48	
MP-238AR	MW	916.36	10:35	10.26	906.10	
MP-241AR	MW	916.39	10:40	16.44	899.95	
MP-247A	PZ	908.47	11:03	14.68	893.79	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1B.
MEASURED WATER LEVELS IN THE 880 SAND ZONE
APRIL 6, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-248B	MW	909.77	09:39	6.41	903.36	
MP-249B	MW	903.68	09:04	2.95	900.73	
MP-250A	MW	910.24	11:07	10.68	899.56	
MP-251A	MW	911.54	10:10	2.82	908.72	
MP-252A	MW	894.88	09:21	2.27	892.61	
MP-261A	PZ	912.36	11:14	13.60	898.76	
MP-264	PZ	909.85	11:22	4.18	905.67	
MP-266A	PZ	899.54	08:56	3.66	895.88	
MP-269A	PZ	912.62	09:16	17.77	894.85	
MP-270A	PZ	911.54	09:09	16.54	895.00	
MP-271A	PZ	914.14	09:34	5.96	908.18	
MP-272A	PZ	913.37	10:15	2.61	910.76	
MP-273ARR	PZ	932.26	11:40	35.38	896.88	
MP-274A	MW	912.78	09:26	17.18	895.60	
MP-275	MW	911.89	09:45	14.53	897.36	
MP-276	MW	906.81	09:26	9.28	897.53	
MP-277A	MW	915.24	10:32	6.31	908.93	
MP-278A	PZ	919.23	11:11	9.10	910.13	
MP-280A	MW	912.28	09:45	17.13	895.15	
MP-281A	PZ	913.69	09:13	18.18	895.51	
MP-285A	PZ	916.14	10:27	5.54	910.60	
MP-289A	PZ	913.33	09:43	9.99	903.34	
MP-290A	PZ	899.09	09:13	5.67	893.42	
MP-294A	PZ	905.35	08:53	7.40	897.95	
MP-296A	PZ	902.90	08:57	4.82	898.08	
MP-300A	PZ	907.33	09:21	7.77	899.56	
MP-304A	MW	908.42	11:04	6.08	902.34	
MP-305A	MW	908.11	11:28	2.80	905.31	
MP-306A	MW	911.34	09:52	13.64	897.70	
MP-401B	MW	906.56	10:49	7.55	899.01	
P-500B	PZ	914.82	11:11	4.02	910.80	
P-501A	PZ	913.93	10:06	4.08	909.85	
P-511A	PZ	913.52	09:20	18.70	894.82	
P-515A	PZ	913.01	12:45	3.33	909.68	
P-517	PZ	912.34	10:20	1.04	911.30	
P-520	PZ	914.77	10:07	4.88	909.89	
P-527	PZ	894.90	09:20	3.12	891.78	
P-528	PZ	900.31	09:18	6.38	893.93	
P-529	PZ	902.51	09:16	3.37	899.14	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1C.
MEASURED WATER LEVELS IN THE CHANNEL SAND ZONE
APRIL 6, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
12-3A	PZ	911.99	12:11	14.72	897.27	
13-12	PZ	913.13	09:00	17.31	895.82	
MP-215BR	MW	909.99	12:16	14.23	895.76	
MP-231BR	PZ	917.95	10:57	21.89	896.06	
MP-242AR	PZ	909.42	08:16	12.23	897.19	
MP-281C	MW	914.12	09:08	18.39	895.73	
MP-282C	PZ	911.37	12:09	15.76	895.61	
MP-283C	PZ	915.34	12:08	19.72	895.62	
MP-286C	MW	914.59	11:53	18.95	895.64	
MP-406C	MW	917.40	09:02	21.28	896.12	
P-500A	PZ	915.99	11:46	19.64	896.35	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
APRIL 6, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
12-3	PZ	910.04	12:15	14.36	895.68	
12-4	PZ	911.99	12:05	16.15	895.84	
12-5	PZ	910.04	--	--	--	Obstruction @ 7.91' precluded WL
12-6	PZ	914.67	09:29	18.95	895.72	
13-5	PZ	914.92	12:25	19.09	895.83	
14-1	PZ	917.02	09:18	21.30	895.72	
14-3	PZ	908.12	09:39	12.50	895.62	
14-4	PZ	911.16	09:43	15.56	895.60	
14-5	PZ	910.09	10:08	13.62	896.47	
14-7	PZ	917.05	08:59	22.53	894.52	
MP-209	PZ	923.14	11:17	21.06	902.08	
MP-214R	PZ	910.86	11:54	14.86	896.00	
MP-217R	PZ	912.91	09:33	15.80	897.11	
MP-221R	PZ	910.54	11:22	10.64	899.90	
MP-222R	PZ	911.89	10:18	11.20	900.69	
MP-223R	PZ	910.05	10:07	12.09	897.96	
MP-226	PZ	913.85	10:34	15.57	898.28	
MP-227R	MW	913.00	10:29	15.52	897.48	
MP-228R	PZ	911.41	10:24	13.08	898.33	
MP-230R	PZ	908.28	10:18	12.50	895.78	
MP-231R	PZ	916.06	10:50	20.72	895.34	
MP-233R	MW	907.00	09:47	10.65	896.35	
MP-234R	MW	911.88	09:54	13.24	898.64	
MP-235R	MW	914.84	10:02	16.72	898.12	
MP-237	MW	913.68	09:57	15.42	898.26	
MP-238R	MW	915.31	10:34	16.92	898.39	
MP-240R	PZ	923.97	10:26	22.32	901.65	
MP-240R1	PZ	922.46	10:28	21.22	901.24	
MP-241R	MW	913.57	10:42	15.41	898.16	
MP-242	PZ	908.37	08:14	<0.00	>908.37	Flowing
MP-243	PZ	883.37	09:02	<0.00	>883.37	Flowing
MP-244R	MW	909.73	11:13	11.29	898.44	
MP-248	PZ	909.81	09:41	11.60	898.21	
MP-249	PZ	904.29	09:05	8.02	896.27	
MP-250	MW	910.07	11:05	11.67	898.40	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
APRIL 6, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-251	PZ	910.99	10:12	9.03	901.96	
MP-252	MW	894.59	09:23	<0.00	>894.59	Flowing
MP-253	PZ	901.36	09:07	7.13	894.23	
MP-254	PZ	886.47	09:04	0.38	886.09	
MP-255	PZ	909.81	10:50	11.66	898.15	
MP-256	PZ	909.57	10:56	20.01	889.56	
MP-259	PZ	904.17	09:11	7.12	897.05	
MP-260	PZ	911.12	10:02	16.97	894.15	
MP-265	PZ	886.34	08:53	4.12	882.22	
MP-266	PZ	899.14	08:55	13.80	885.34	
MP-267	PZ	891.68	08:59	6.35	885.33	
MP-269	PZ	912.79	09:18	19.68	893.11	
MP-270	MW	911.94	09:06	15.95	895.99	
MP-271	PZ	914.70	12:53	14.53	900.17	
MP-272	PZ	912.79	10:17	8.13	904.66	
MP-273B	PZ	932.17	11:43	36.39	895.78	
MP-274	MW	912.20	09:24	16.17	896.03	
MP-279	MW	910.36	09:59	9.62	900.74	
MP-280	MW	912.49	09:47	14.06	898.43	
MP-281	MW	913.53	09:11	17.70	895.83	
MP-284	PZ	913.43	10:10	7.06	906.37	
MP-285	PZ	915.37	10:25	11.27	904.10	
MP-287	PZ	889.18	08:50	0.74	888.44	
MP-290	PZ	898.20	09:10	0.16	898.04	
MP-294	PZ	906.14	08:52	11.12	895.02	
MP-296	PZ	902.87	08:56	8.48	894.39	
MP-304	MW	908.36	11:02	9.72	898.64	
MP-305	MW	907.74	11:26	13.29	894.45	
MP-404	MW	912.75	09:34	15.69	897.06	
MP-407	MW	910.31	10:12	14.22	896.09	
MP-408	MW	916.41	08:55	21.79	894.62	
MP-409	MW	911.83	10:06	9.63	902.20	
P-500	PZ	914.68	11:49	11.03	903.65	
P-501	PZ	914.30	10:04	10.30	904.00	
P-503	PZ	916.15	09:52	12.39	903.76	
P-504	PZ	915.71	09:50	16.83	898.88	
P-505	PZ	916.40	09:46	17.10	899.30	
P-506	PZ	916.06	09:42	12.27	903.79	
P-508	PZ	913.19	09:31	21.69	891.50	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
APRIL 6, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
P-509	PZ	909.97	09:28	14.66	895.31	
P-510	PZ	914.17	09:25	17.76	896.41	
P-511	PZ	913.22	09:22	15.06	898.16	
P-513	PZ	912.76	09:13	15.32	897.44	
P-515	PZ	913.13	10:01	9.24	903.89	

Note: PZ = piezometer; MW = monitoring well.

FIGURES

CRESCENT ISLE LAKE

CELL 1/2

CELL 3

CELL 4/5

SCMF 6

SCMF 7

SCMF 8

SCMF 9

SCMF 10

CELL 11
(DID NOT RECEIVE WASTE)

CELL 13
(DID NOT RECEIVE WASTE)

SANITARY LANDFILL

INTERMEDIATE LANDFILL

FIRE POND 1

FIRE POND 4/5

SLURRY WALL

PERMITTED AREA BOUNDARY

MP-284B MP-284 MP-272A MP-272 P-503 MP-285B MP-285A MP-285 P-504 P-517 P-520 P-505 P-505A P-501A P-501 MP-242AR MP-242 P-515A P-515 P-506 P-500A P-500B P-500 MP-286C MP-271 MP-271A P-508 MP-277B MP-277A MP-205D MP-205C MP-206AR MP-206CR MP-206 MP-205BR MP-210AR MP-251A MP-251 MP-231AR MP-231R MP-231BR MP-203C MP-203A MP-203R MP-204A P-510 MP-211BR MP-409 MP-278A MP-212A MP-212B P-509 MP-279 MP-273B MP-273ARR MP-213A P-511A P-511 MP-280A MP-405A MP-281A MP-281C MP-274A MP-274 MP-404A MP-404 MP-269 MP-269A MP-403A MP-214R MP-214BR MP-270A MP-270 MP-282C 12-3 12-3A P-513 MP-215BR MP-215A MP-283C 13-5 MP-216BR 13-12 MP-276 MP-303B MP-301B MP-300A MP-306A 880-PZ1 MP-299B MP-208 MP-246 MP-275 MP-248B MP-248 MP-289A MP-259 MP-260 MP-207 MP-223R MP-223AR MP-224B MP-202 MP-226 MP-227R MP-227AR MP-228AR MP-228R MP-228B MP-229B MP-230R MP-230A MP-249B MP-249 M-06 MP-222B MP-268 MP-222R MP-259B MP-296 MP-296A MP-256 MP-255 MP-255A MP-240R MP-240R1 MP-201 MP-304 880-PZ4 MP-304A MP-294 MP-294A M-25 MP-238AR MP-238R MP-221R MP-235A MP-235BR MP-235R MP-235AR MP-232A MP-407 MP-408 14-7 14-1 14-5 12-6 12-5 MP-234R MP-234AR MP-233AR MP-233R MP-402A 880-PZ5 MP-241AR MP-241R MP-305A 880-PZ2 MP-305 MP-220AR MP-264 MP-219A MP-200R MP-261A MP-250 MP-244AR MP-244R MP-250A MP-401B MP-401A MP-247A MP-217A MP-217B MP-217R 14-4 14-3 MP-287 MP-265 MP-266 MP-266A MP-267 MP-254 MP-243 P-529 P-528 P-527 MP-252A MP-252 MP-290B MP-290A MP-253A MP-253 MP-290

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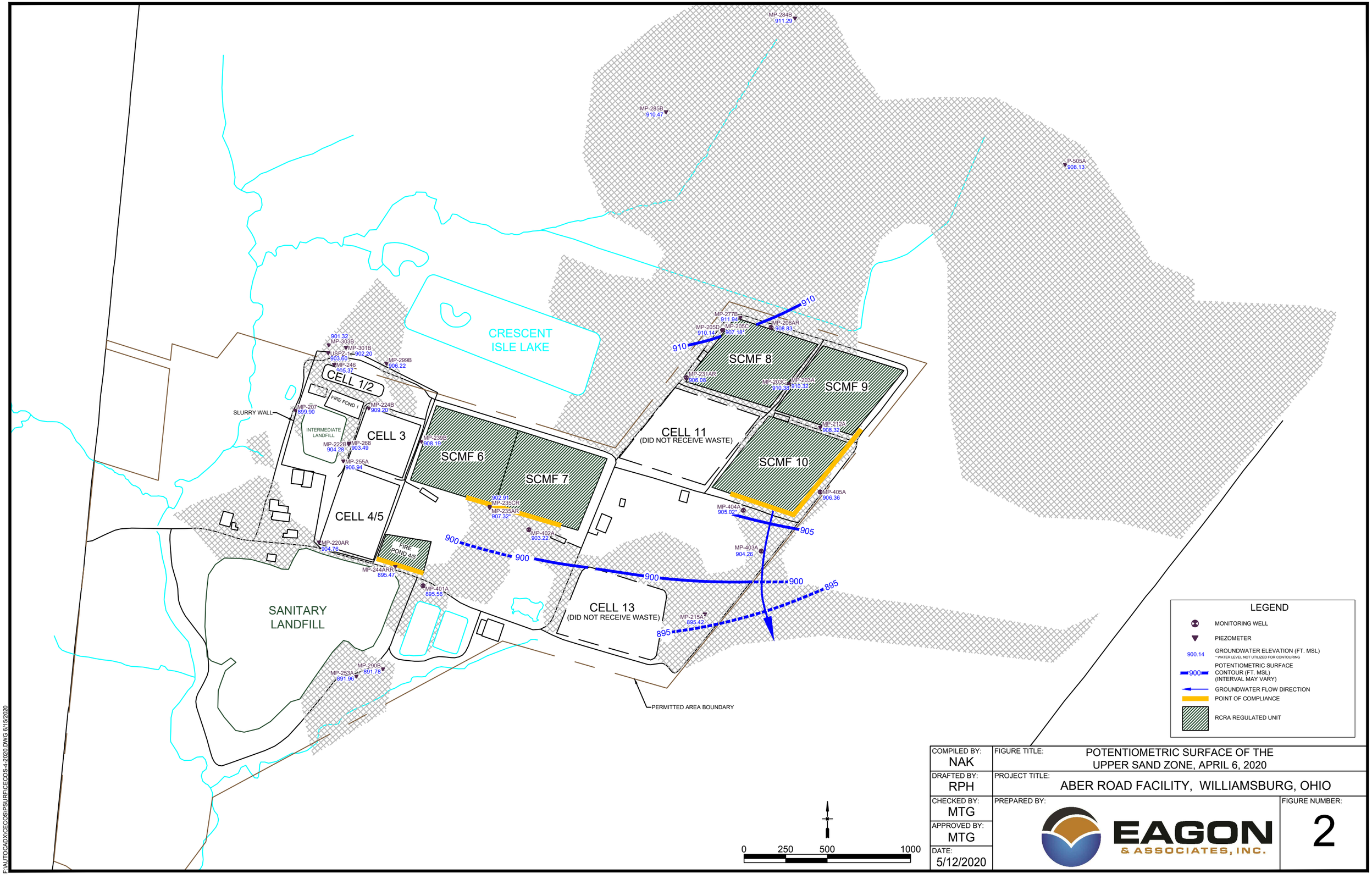
LEGEND

- 880 SAND ZONE WELLS
- BEDROCK-TILL INTERFACE WELLS
- CHANNEL SAND WELLS
- UPPER SAND WELLS
- RCRA REGULATED UNIT

0 250 500 1000

COMPILED BY: NAK	FIGURE TITLE: BASE MAP
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 1
DATE: 12/17/2019	



COMPILED BY: NAK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE UPPER SAND ZONE, APRIL 6, 2020
DRAFTED BY: RPH	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 2
DATE: 5/12/2020	

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CRESCENT ISLE LAKE

MP-272A 910.76
MP-285A 910.60
P-517 911.30
P-520 909.89
P-501A 909.85
P-515A 909.68
P-500B 910.80
910
MP-271A 908.18
905
900
895
MP-277A 908.93
909.30
MP-206CR
MP-206 909.31
MP-205BR 908.72
SCMF 8
SCMF 9
MP-210AR 908.98
MP-251A 908.72
MP-204A 910.47
MP-203R 910.38
MP-211BR 904.32
MP-278A 910.13
MP-212B 908.68
CELL 11
(DID NOT RECEIVE WASTE)
MP-273ARR 896.88
SCMF 10
MP-213A 895.10
MP-280A 895.15
MP-281A 895.51
MP-274A 895.60
P-511A 894.82
MP-269A 894.85
MP-214BR 894.35
MP-270A 895.00

897.53
MP-276
MP-300A 899.56
MP-306A 897.70
880-PZ1 902.93
MP-208 899.75
903.36
MP-248B
MP-275 897.36
MP-289A 903.34
CELL 1/2
FIRE POND 1
SLURRY WALL
MP-223AR 903.45
MP-202 903.70
M-06 924.33
INTERMEDIATE LANDFILL
CELL 3
MP-249B 900.73
MP-296A 898.08
904.45
MP-201
880-PZ3 905.90
903.59
880-PZ4
MP-304A 902.34
MP-294A 897.95
M-25 904.44
CELL 4/5
905.72
880-PZ5
MP-241AR 899.95
MP-305A 905.31
880-PZ2 903.26
MP-264 905.67
MP-219A 904.88
MP-200R 898.74
MP-261A 898.76
FIRE POND 4/5
MP-250A 899.56
MP-401B 899.01
SANITARY LANDFILL
MP-266A 895.88
P-529 899.14
P-528 893.93
P-527 891.78
MP-290A 893.42
MP-247A 893.79
MP-252A 892.61
MP-217A 896.99
MP-217B 897.02
CELL 13
(DID NOT RECEIVE WASTE)
MP-216BR 897.11
PERMITTED AREA BOUNDARY

897.38
MP-227AR
897.21
MP-228AR
MP-228B 897.25
MP-229B 897.30
895.82
MP-230A
SCMF 6
SCMF 7
MP-232A 895.33
MP-238AR 906.10
MP-235BR 899.48
MP-234AR 902.80
MP-233AR 901.64

0 250 500 1000

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 GROUNDWATER ELEVATION (FT. MSL) * WATER LEVEL NOT UTILIZED FOR CONTOURING
- 900 POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

COMPILED BY: NAK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE 880 SAND ZONE, APRIL 6, 2020
DRAFTED BY: RPH	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 3
DATE: 6/15/2020	

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CRESCENT ISLE LAKE

CELL 1/2

FIRE POND 1

SLURRY WALL

INTERMEDIATE LANDFILL

CELL 3

CELL 4/5

FIRE POND 4/5

SCMF 6

SCMF 7

SCMF 8

SCMF 9

SCMF 10

CELL 11
(DID NOT RECEIVE WASTE)

CELL 13
(DID NOT RECEIVE WASTE)

SANITARY LANDFILL

PERMITTED AREA BOUNDARY

MP-242AR
897.19

897

897

896.5

896.5

P-500A
896.35

MP-286C
895.64*

MP-231BR
896.06

MP-406C
896.12

MP-281C
895.73

896

896

MP-282C
895.61

12-3A
895.78

MP-215BR
895.76

MP-283C
895.62

13-12
895.82

0 250 500 1000

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 GROUNDWATER ELEVATION (FT. MSL) * WATER LEVEL NOT UTILIZED FOR CONTOURING
- 900 POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

COMPILED BY: NAK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE CHANNEL SAND ZONE, APRIL 6, 2020	
DRAFTED BY: RPH	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 4
APPROVED BY: MTG		
DATE: 6/15/2020		

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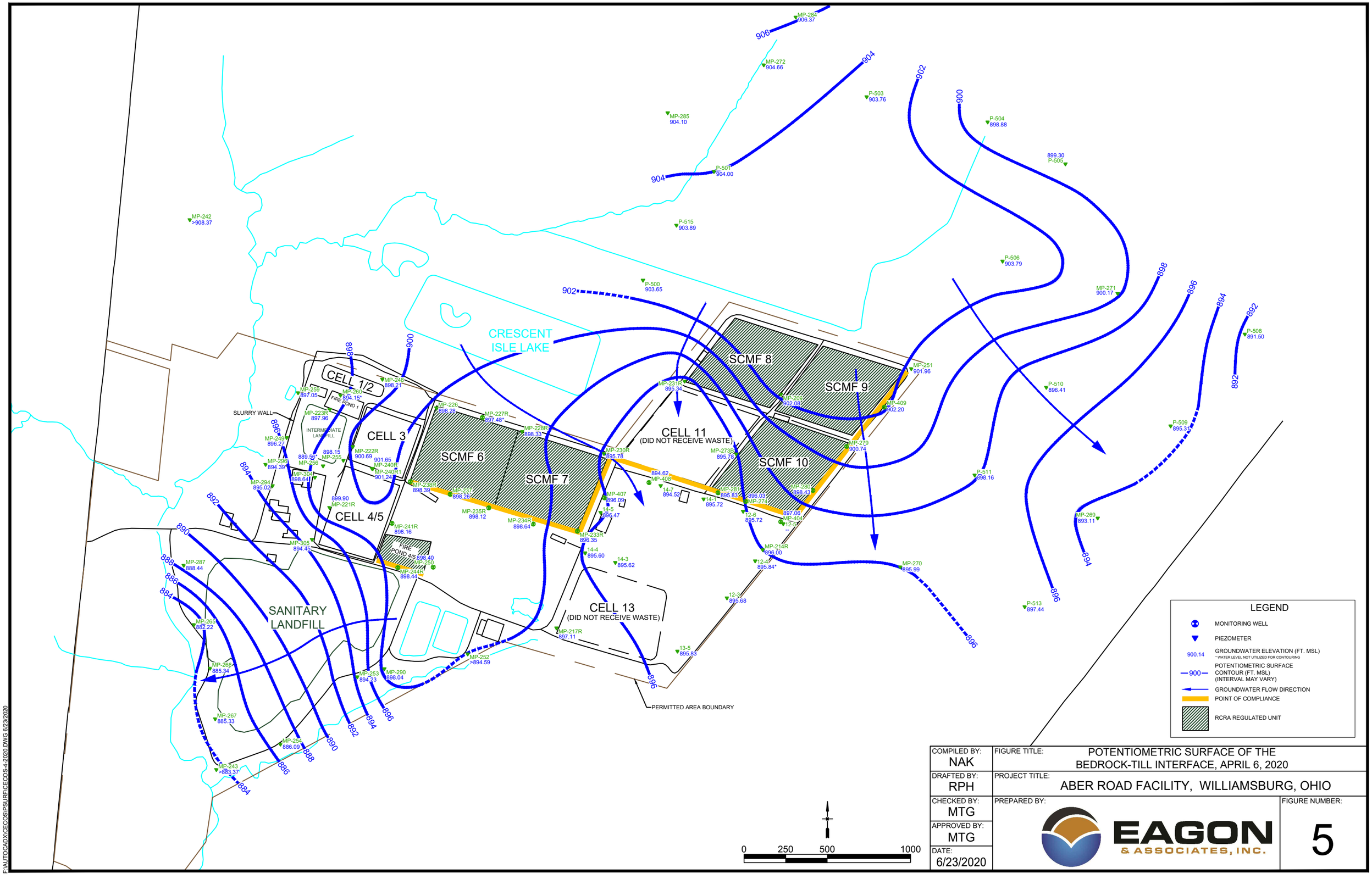

COMPILED BY: NAK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE BEDROCK-TILL INTERFACE, APRIL 6, 2020	
DRAFTED BY: RPH	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO	
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.	FIGURE NUMBER: 5
APPROVED BY: MTG		
DATE: 6/23/2020		

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October 2020 Water Level Data

TABLES

TABLE 1A.
MEASURED WATER LEVELS IN THE UPPER SAND ZONE
OCTOBER 5, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-203A	PZ	928.74	1205	19.08	909.66	
MP-203C	PZ	927.60	1206	17.89	909.71	
MP-205C	PZ	915.36	1114	8.94	906.42	
MP-205D	PZ	915.73	1115	8.59	907.14	
MP-206AR	MW	916.73	1054	11.02	905.71	
MP-207	MW	906.54	0912	7.80	898.74	
MP-212A	PZ	913.30	0912	7.80	905.50	
MP-215A	MW	909.11	0912	15.20	893.91	
MP-220AR	PZ	910.10	1113	7.07	903.03	
MP-222B	MW	910.09	1044	7.10	902.99	
MP-224B	MW	913.83	1022	6.86	906.97	
MP-231AR	MW	915.73	1128	9.47	906.26	
MP-235AR	PZ	913.53	1004	7.94	905.59	
MP-235CR	MW	914.66	1002	11.90	902.76	
MP-239B	MW	915.58	1038	8.64	906.94	
MP-244ARR	MW	909.82	1053	15.18	894.64	
MP-246	MW	908.59	0937	4.78	903.81	
MP-253A	PZ	900.34	0914	11.36	888.98	
MP-255A	PZ	910.82	1047	5.32	905.50	
MP-268	PZ	910.12	1041	7.96	902.16	
MP-277B	PZ	915.56	1106	7.51	908.05	
MP-284B	PZ	913.31	1136	5.79	907.52	
MP-285B	PZ	915.27	1124	8.30	906.97	
MP-290B	MW	898.71	0924	9.44	889.27	
MP-299B	PZ	911.62	0954	12.01	899.61	
MP-301B	PZ	907.90	0942	10.00	897.90	
MP-303B	MW	906.24	0951	7.97	898.27	
MP-401A	MW	906.37	0918	11.60	894.77	
MP-402A	MW	908.42	0954	5.30	903.12	
MP-403A	MW	912.37	0926	10.54	901.83	
MP-404A	MW	915.09	0934	8.06	907.03	
MP-405A	MW	911.02	1006	9.39	901.63	
P-505A	PZ	915.97	1041	10.93	905.04	
USPZ-1	PZ	908.00	0933	7.40	900.60	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1B.
MEASURED WATER LEVELS IN THE 880 SAND ZONE
OCTOBER 5, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
880-PZ1	PZ	908.49	0922	7.12	901.37	
880-PZ2	PZ	907.11	1116	5.66	901.45	
880-PZ3	PZ	915.45	1005	9.68	905.77	
880-PZ4	PZ	909.45	1101	6.82	902.63	
880-PZ5	PZ	914.42	1007	9.30	905.12	
M-06	PZ	932.75	1037	8.60	924.15	
M-25	PZ	913.32	1053	10.97	902.35	
MP-200R	PZ	913.79	1050	16.00	897.79	
MP-201	PZ	909.86	1050	7.48	902.38	
MP-202	MW	911.89	1033	10.45	901.44	
MP-203R	PZ	927.77	1207	18.08	909.69	
MP-204A	PZ	917.16	1131	7.20	909.96	
MP-205BR	PZ	914.62	1117	9.09	905.53	
MP-206	PZ	915.99	1059	10.23	905.76	
MP-206CR	PZ	915.31	1057	9.59	905.72	
MP-208	MW	907.57	0917	10.50	897.07	
MP-210AR	MW	912.83	1046	6.58	906.25	
MP-211BR	MW	911.09	1029	8.24	902.85	
MP-212D	PZ	912.48	1225	3.80	908.68	
MP-213A	MW	912.98	1017	19.44	893.54	
MP-214BR	MW	910.29	0931	16.48	893.81	
MP-216BR	MW	911.36	0903	13.93	897.43	
MP-217A	PZ	914.14	0938	17.54	896.60	
MP-217B	PZ	914.24	0940	17.47	896.77	
MP-219A	MW	912.34	1117	9.34	903.00	
MP-223AR	PZ	910.63	1029	9.72	900.91	
MP-227AR	PZ	912.12	1031	16.37	895.75	
MP-228AR	MW	911.64	1028	16.03	895.61	
MP-228B	PZ	911.34	1027	15.76	895.58	
MP-229B	PZ	910.63	1022	14.87	895.76	
MP-230A	MW	908.75	1019	14.39	894.36	
MP-232A	MW	909.75	1111	15.96	893.79	
MP-233AR	MW	907.44	0951	5.96	901.48	
MP-234AR	MW	910.90	1008	8.22	902.68	
MP-235BR	MW	914.50	1003	15.87	898.63	
MP-238AR	MW	916.36	1043	9.94	906.42	
MP-241AR	MW	916.39	1009	16.44	899.95	
MP-247A	PZ	908.47	1103	15.40	893.07	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1B.
MEASURED WATER LEVELS IN THE 880 SAND ZONE
OCTOBER 5, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-248B	MW	909.77	0951	8.94	900.83	
MP-249B	MW	903.68	0907	4.57	899.11	
MP-250A	MW	910.24	1100	11.58	898.66	
MP-251A	MW	911.54	1159	5.66	905.88	
MP-252A	MW	894.88	0935	3.31	891.57	
MP-261A	PZ	912.36	1051	13.50	898.86	
MP-264	PZ	909.85	1119	5.65	904.20	
MP-266A	PZ	899.54	0903	7.95	891.59	
MP-269A	PZ	912.62	0957	19.29	893.33	
MP-270A	PZ	911.54	0945	18.06	893.48	
MP-271A	PZ	914.14	1051	7.29	906.85	
MP-272A	PZ	913.37	1132	6.00	907.37	
MP-273ARR	PZ	932.26	1135	36.76	895.50	
MP-274A	MW	912.78	0930	18.86	893.92	
MP-275	MW	911.89	0958	16.17	895.72	
MP-276	MW	906.81	0929	10.92	895.89	
MP-277A	MW	915.24	1221	9.68	905.56	
MP-278A	PZ	919.23	1214	9.73	909.50	
MP-280A	MW	912.28	1009	18.74	893.54	
MP-281A	PZ	913.69	0951	19.96	893.73	
MP-285A	PZ	916.14	1123	8.80	907.34	
MP-289A	PZ	913.33	1000	12.48	900.85	
MP-290A	PZ	899.09	0925	7.34	891.75	
MP-294A	PZ	905.35	0855	4.95	900.40	
MP-296A	PZ	902.90	0900	5.36	897.54	
MP-300A	PZ	907.33	0924	10.47	896.86	
MP-304A	MW	908.42	1057	7.32	901.10	
MP-305A	MW	908.11	1111	2.73	905.38	
MP-306A	MW	911.34	0945	15.35	895.99	
MP-401B	MW	906.56	0916	8.38	898.18	
P-500B	PZ	914.82	1152	10.83	903.99	
P-501A	PZ	913.93	1127	7.82	906.11	
P-511A	PZ	913.52	1015	20.21	893.31	
P-515A	PZ	913.01	1115	--	--	
P-517	PZ	912.34	1129	5.79	906.55	
P-520	PZ	914.77	1151	8.55	906.22	
P-527	PZ	894.90	0931	4.49	890.41	
P-528	PZ	900.31	0922	7.96	892.35	
P-529	PZ	902.51	0920	4.03	898.48	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1C.
MEASURED WATER LEVELS IN THE CHANNEL SAND ZONE
OCTOBER 5, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
12-3A	PZ	911.99	0920	16.21	895.78	
13-12	PZ	913.13	0905	19.42	893.71	
MP-215BR	MW	909.99	0913	15.80	894.19	
MP-231BR	PZ	917.95	1126	23.67	894.28	
MP-242AR	PZ	909.42	0830	13.70	895.72	
MP-281C	MW	914.12	0954	20.94	893.18	
MP-282C	PZ	911.37	0919	17.14	894.23	
MP-283C	PZ	915.34	0907	21.19	894.15	
MP-286C	MW	914.59	1153	19.94	894.65	
MP-406C	MW	917.40	0909	22.85	894.55	
P-500A	PZ	915.99	1159	20.71	895.28	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
OCTOBER 5, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
12-3	PZ	910.04	0922	14.73	895.31	
12-4	PZ	910.04	0925	16.24	893.80	
12-5	PZ	914.67	0959	13.81	900.86	
12-6	PZ	910.50	0935	20.51	889.99	
13-5	PZ	914.92	0937	19.05	895.87	
14-1	PZ	917.02	0913	22.88	894.14	
14-3	PZ	908.12	0944	12.55	895.57	
14-4	PZ	911.16	0946	15.53	895.63	
14-5	PZ	910.09	1011	14.87	895.22	
14-7	PZ	917.05	0905	22.60	894.45	
MP-209	PZ	923.14	1211	21.23	901.91	
MP-214R	PZ	910.86	0929	14.16	896.70	
MP-217R	PZ	912.91	0937	16.44	896.47	
MP-221R	PZ	910.54	1107	12.74	897.80	
MP-222R	PZ	911.89	1039	12.12	899.77	
MP-223R	PZ	910.05	1028	13.43	896.62	
MP-226	PZ	913.85	1036	16.66	897.19	
MP-227R	MW	913.00	1030	17.19	895.81	
MP-228R	PZ	911.41	1025	13.89	897.52	
MP-230R	PZ	908.28	1020	13.98	894.30	
MP-231R	PZ	916.06	1124	21.29	894.77	
MP-233R	MW	907.00	0948	11.33	895.67	
MP-234R	MW	911.88	1007	14.01	897.87	
MP-235R	MW	914.84	1000	17.82	897.02	
MP-237	MW	913.68	0957	16.26	897.42	
MP-238R	MW	915.31	1045	17.38	897.93	
MP-240R	PZ	923.97	1015	23.50	900.47	
MP-240R1	PZ	922.46	1017	22.70	899.76	
MP-241R	MW	913.57	1012	16.43	897.14	
MP-242	PZ	908.37	0831	<0.000	>908.37	Flowing
MP-243	PZ	883.37	0907	<0.00	>883.37	Flowing
MP-244R	MW	909.73	1055	12.11	897.62	
MP-248	PZ	909.81	0950	12.65	897.16	
MP-249	PZ	904.29	0905	9.05	895.24	
MP-250	MW	910.07	1058	12.07	898.00	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
OCTOBER 5, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
MP-251	PZ	910.99	1040	9.08	901.91	
MP-252	MW	894.59	0933	<0.00	>894.59	Flowing
MP-253	PZ	901.36	0912	8.12	893.24	
MP-254	PZ	886.47	0909	0.31	886.16	
MP-255	PZ	909.81	1048	12.80	897.01	
MP-256	PZ	909.57	1103	21.07	888.50	
MP-259	PZ	904.17	0915	8.11	896.06	
MP-260	PZ	911.12	1025	18.07	893.05	
MP-265	PZ	886.34	0900	4.35	881.99	
MP-266	PZ	899.14	0902	11.01	888.13	
MP-267	PZ	891.68	0905	3.49	888.19	
MP-269	PZ	912.79	0959	20.93	891.86	
MP-270	MW	911.94	0943	16.57	895.37	
MP-271	PZ	914.70	1052	14.69	900.01	
MP-272	PZ	912.79	1133	8.21	904.58	
MP-273B	PZ	932.17	1137	37.96	894.21	
MP-274	MW	912.20	0924	17.87	894.33	
MP-279	MW	910.36	1022	10.88	899.48	
MP-280	MW	912.49	1010	14.29	898.20	
MP-281	MW	913.53	0953	19.31	894.22	
MP-284	PZ	913.43	1138	7.20	906.23	
MP-285	PZ	915.37	1122	11.60	903.77	
MP-287	PZ	889.18	0858	0.02	889.16	
MP-290	PZ	898.20	0927	0.98	897.22	
MP-294	PZ	906.14	0855	11.68	894.46	
MP-296	PZ	902.87	0901	8.33	894.54	
MP-304	MW	908.36	1059	5.78	902.58	
MP-305	MW	907.74	1110	13.16	894.58	
MP-404	MW	912.75	0959	16.86	895.89	
MP-407	MW	910.31	1013	15.66	894.65	
MP-408	MW	916.41	0901	21.87	894.54	
MP-409	MW	911.83	1031	9.67	902.16	
P-500	PZ	914.68	1156	11.12	903.56	
P-501	PZ	914.30	1128	10.42	903.88	
P-503	PZ	916.15	1141	12.52	903.63	
P-504	PZ	915.71	1146	16.04	899.67	
P-505	PZ	916.40	1040	17.27	899.13	
P-506	PZ	916.06	1046	12.49	903.57	
P-508	PZ	913.19	1059	21.97	891.22	

Note: PZ = piezometer; MW = monitoring well.

TABLE 1D.
MEASURED WATER LEVELS IN THE BEDROCK-TILL INTERFACE
OCTOBER 5, 2020
CECOS-ABER ROAD FACILITY

Well ID	Use	Top of Casing Elevation (ft, MSL)	Time	Depth to Water (ft)	Groundwater Elevation (ft, MSL)	Notes
P-509	PZ	909.97	1054	14.55	895.42	
P-510	PZ	914.17	1029	18.53	895.64	
P-511	PZ	913.22	1016	15.16	898.06	
P-513	PZ	912.76	0948	15.56	897.20	
P-515	PZ	913.13	1116	9.41	903.72	

Note: PZ = piezometer; MW = monitoring well.

FIGURES

MP-284B MP-284
MP-272A MP-272
P-503
MP-285B MP-285A MP-285
P-504
P-517
P-520
P-505 P-505A
P-501A P-501
MP-242AR MP-242
P-515A P-515
P-506
P-500A
P-500B
P-500
MP-286C
MP-271 MP-271A
P-508
CRESCENT ISLE LAKE
MP-277B MP-277A
MP-205D MP-205C
MP-206AR
MP-206CR
MP-206
MP-205BR
MP-210AR
SCMF 8
MP-251A MP-251
MP-231AR
MP-231R MP-231BR
MP-203C MP-203A
MP-203R
SCMF 9
P-510
MP-204A
MP-278A
MP-211BR MP-409
MP-212A
MP-212B
P-509
MP-276 MP-303B
MP-300A MP-301B
USPZ-1 MP-306A
880-PZ1
MP-208 MP-246
MP-299B
CELL 1/2
MP-248B MP-275
MP-248 MP-289A
MP-259 MP-260
FIRE POND 1
MP-207
MP-223R MP-223AR
MP-224B
SLURRY WALL
MP-202
MP-226 MP-227R
MP-227AR MP-228AR MP-228R
MP-228B
MP-229B
MP-230R
MP-230A
M-06
INTERMEDIATE LANDFILL
CELL 3
MP-249B MP-249
MP-222B MP-268
MP-222R
MP-255
MP-296A MP-296
MP-256 MP-255A
MP-240R
MP-240R1
MP-201
MP-304 880-PZ4
MP-294 MP-304A
MP-294A
M-25
MP-238AR
MP-238R
SCMF 6
SCMF 7
MP-232A
MP-407
MP-408
14-7
MP-408A
MP-281A
14-1
MP-281C
MP-274A MP-274
MP-404A
12-6
MP-404
12-5
MP-213A
MP-280A
MP-405A
P-511A P-511
MP-221R
CELL 4/5
880-PZ5
MP-241AR
MP-241R
MP-235R
MP-235BR MP-235CR
MP-235AR
MP-234R
MP-234AR
MP-402A
MP-233AR
MP-233R
14-5
14-4
14-3
MP-269 MP-269A
MP-305A 880-PZ2
MP-305
MP-220AR
MP-264
MP-219A
MP-200R
MP-261A
MP-250
MP-244AR
MP-244R
MP-250A
FIRE POND 4/5
MP-403A
MP-214R
MP-214BR
12-4
MP-270A MP-270
MP-287
MP-401B
MP-401A
MP-282C
12-2
12-3A
MP-247A
CELL 13
(DID NOT RECEIVE WASTE)
MP-215BR
MP-215A
P-513
SANITARY LANDFILL
MP-265
P-529
MP-217A
MP-217B
MP-217R
P-528
MP-283C
13-5
MP-252A
MP-252
P-527
MP-216BR
MP-266
MP-266A
MP-290B
MP-290A
MP-253A
MP-253
MP-290
13-12
MP-267
MP-254
MP-243
PERMITTED AREA BOUNDARY

LEGEND

- 880 SAND ZONE WELLS
- BEDROCK-TILL INTERFACE WELLS
- CHANNEL SAND WELLS
- UPPER SAND WELLS
- RCRA REGULATED UNIT

0 250 500 1000

COMPILED BY: NAK	FIGURE TITLE: BASE MAP
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 1
DATE: 10/29/2020	

F:\AUTOCADX\CECOS\PSURF\CECOS-10-2020.DWG 10/29/2020

MP-284B
907.52

MP-285B
906.97

P-505A
905.04

CRESCENT
ISLE LAKE

MP-277B
908.05
MP-205D
907.14
MP-205C
906.42
MP-206AR
905.71

SCMF 8

SCMF 9

MP-231AR
906.26
MP-203C
908.71
MP-203A
909.86

MP-211A
907.63

898.27
MP-303B
MP-301B
USP2-1
900.60
897.90
MP-246
903.81
MP-299B
899.61

CELL 1/2

FIRE POND 1

SLURRY WALL

MP-207
898.74
MP-224B
906.97

905

INTERMEDIATE
LANDFILL

CELL 3

MP-222B
902.99
MP-268
902.16
MP-255A
905.50

MP-236B
906.94

SCMF 6

SCMF 7

CELL 11
(DID NOT RECEIVE WASTE)

SCMF 10

MP-405A
901.63

902.76
MP-235CR
MP-235AR
905.59

MP-404A
907.03

MP-402A
903.12

CELL 4/5

MP-220AR
903.03

FIRE
POND 4/5

MP-244ARR
894.64

MP-401A
894.77

900

905

900

900

895

895

895

CELL 13
(DID NOT RECEIVE WASTE)

MP-215A
893.91

MP-403A
901.83

SANITARY
LANDFILL

890

MP-290B
889.27
MP-253A
888.98

PERMITTED AREA BOUNDARY

0 250 500 1000

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 GROUNDWATER ELEVATION (FT. MSL) * WATER LEVEL NOT UTILIZED FOR CONTOURING
- 900 POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

COMPILED BY: NAK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE UPPER SAND ZONE, OCTOBER 5, 20120
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 2
DATE: 10/29/2020	

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CRESCENT ISLE LAKE

CELL 1/2

FIRE POND 1

SLURRY WALL

INTERMEDIATE LANDFILL

CELL 3

CELL 4/5

FIRE POND 4/5

SANITARY LANDFILL

SCMF 6

SCMF 7

SCMF 8

SCMF 9

SCMF 10

CELL 11
(DID NOT RECEIVE WASTE)

CELL 13
(DID NOT RECEIVE WASTE)

PERMITTED AREA BOUNDARY

MP-272A 907.37
MP-285A 907.34
P-517 906.55
P-520 906.22
P-501A 906.11
P-515A ND
P-500B 903.99
MP-271A 906.85
MP-277A 905.56
905.72
MP-206CR
MP-206 905.78
MP-205BR 905.53
MP-210AR 906.25
MP-251A 905.88
MP-204A 909.96
MP-203R 909.69
MP-211BR 902.85
MP-278A 909.50
MP-212B 908.84
MP-213A 893.54
MP-280A 893.54
MP-273ARR 895.50
MP-281A 893.73
MP-274A 893.92
P-511A 893.31
MP-269A 893.33
MP-214BR 893.81
MP-270A 893.48
895.89
MP-276
MP-300A 896.86
880-PZ1 901.37
MP-306A 895.99
MP-208 897.07
900.83
MP-248B
MP-275 895.72
MP-289A 900.85
MP-223AR 900.91
MP-202 901.44
M-06R 924.15
MP-249B 899.11
MP-296A 897.54
MP-294A 900.40
902.38
MP-201
902.63
880-PZ4
MP-304A 901.10
M-25 902.35
880-PZ3 905.77
MP-238AR 906.42
905.12
880-PZ5
MP-241AR 899.95
MP-305A 905.38
880-PZ2 901.45
MP-264 904.20
MP-219A 903.00
MP-200R 897.79
MP-261A 898.86
MP-250A 898.66
MP-401B 898.18
P-529 898.48
P-528 892.35
P-527 890.41
MP-290A 891.75
MP-266A 891.59
895.75
MP-227AR
895.61
MP-228AR
MP-228B 895.58
MP-229B 895.76
894.36
MP-230A
MP-235BR 898.63
MP-234AR 902.68
MP-233AR 901.48
MP-232A 893.78
MP-247A 893.07
MP-217A 896.60
MP-217B 896.77
MP-252A 891.57
MP-216BR 897.43

905
900
895
893

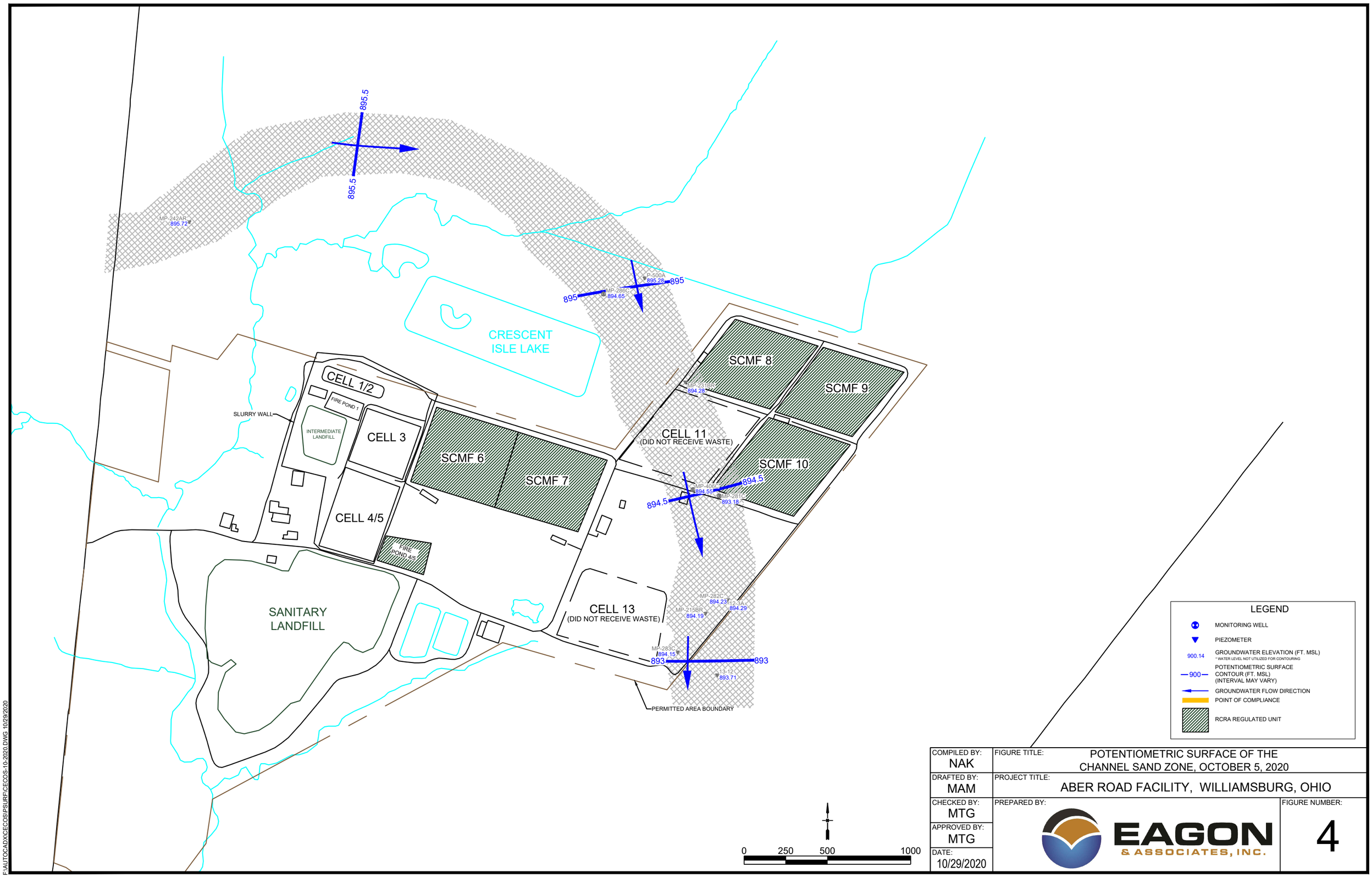
LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 GROUNDWATER ELEVATION (FT. MSL) * WATER LEVEL NOT UTILIZED FOR CONTOURING
- 900 POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

0 250 500 1000

COMPILED BY: NAK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE 880 SAND ZONE, OCTOBER 5, 2020
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 3
DATE: 11/11/2020	

F:\AUTOCADX\CECOS\PSURF\CECOS-10-2020.DWG 11/10/2020



COMPILED BY: NAK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE CHANNEL SAND ZONE, OCTOBER 5, 2020
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 4
DATE: 10/29/2020	

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CRESCENT ISLE LAKE

CELL 1/2

CELL 3

CELL 4/5

CELL 11
(DID NOT RECEIVE WASTE)

CELL 13
(DID NOT RECEIVE WASTE)

SCMF 6

SCMF 7

SCMF 8

SCMF 9

SCMF 10

SANITARY LANDFILL

SLURRY WALL

INTERMEDIATE LANDFILL

FIRE POND 1

FIRE POND 4/5

PERMITTED AREA BOUNDARY

MP-284 906.23
MP-272 904.58
MP-285 903.77
P-503 903.63
P-504 899.67
P-505 899.13
P-501 903.88
MP-242 >908.37
P-515 903.72
P-506 903.57
P-500 903.56
MP-271 900.01
P-508 891.22
MP-251 901.91
P-510 895.64
MP-231R 894.77
MP-409 902.16
MP-279 899.48
P-509 895.42
MP-259 896.06
MP-260 893.05
MP-248 897.16
MP-226 897.19
MP-227R 895.81
MP-228R 897.52
MP-223R 896.62
MP-249 895.24
MP-222R 899.77
MP-255 900.47
MP-240R 899.76
MP-240R1 899.76
MP-296 894.54
MP-256 888.50
MP-304 902.58
MP-294 894.46
MP-238R1 897.93
MP-237 897.42
MP-235R 897.02
MP-234R 897.87
MP-230R 894.30
MP-408 894.54
MP-407 894.65
14-7 894.45
14-1 894.14
MP-273R 894.21
MP-274 894.33
MP-281 888.20
MP-511 898.06
MP-269 891.86
MP-221R 897.80
14-5 895.22
12-6 894.16
MP-404 899.89
12-5 896.23
MP-241R 897.14
MP-233R 895.67
MP-214R 896.70
MP-305 894.58
14-4 895.63
14-3 895.57
12-4 895.75
MP-270 895.37
MP-287 889.16
MP-250 898.00
MP-244R 897.62
12-3 895.31
MP-513 897.20
MP-265 887.99
MP-217R 896.47
13-5 895.87
MP-266 888.13
MP-252 >894.59
MP-258 893.24
MP-290 897.22
MP-267 888.19
MP-254 886.16
MP-243 >883.37

0 250 500 1000

LEGEND

- MONITORING WELL
- PIEZOMETER
- 900.14 — GROUNDWATER ELEVATION (FT. MSL) * WATER LEVEL NOT UTILIZED FOR CONTOURING
- 900 — POTENTIOMETRIC SURFACE CONTOUR (FT. MSL) (INTERVAL MAY VARY)
- GROUNDWATER FLOW DIRECTION
- POINT OF COMPLIANCE
- RCRA REGULATED UNIT

COMPILED BY: NAK	FIGURE TITLE: POTENTIOMETRIC SURFACE OF THE BEDROCK-TILL INTERFACE, OCTOBER 5, 2020
DRAFTED BY: MAM	PROJECT TITLE: ABER ROAD FACILITY, WILLIAMSBURG, OHIO
CHECKED BY: MTG	PREPARED BY: EAGON & ASSOCIATES, INC.
APPROVED BY: MTG	FIGURE NUMBER: 5
DATE: 10/29/2020	

F:\AUTOCADX\CECOS\PSURF\CECOS-10-2020.DWG 10/29/2020

SECTION IV

TOTAL WEIGHT, MANIFEST NUMBERS, TREATMENT METHOD AND DISPOSAL DESTINATION OF TSCA LEACHATE FILTER CAKE

2020 Waste Profiles

Waste Profile Numbers - AI3875; AL375602; AL404069

The total TSCA leachate solids from the LTS filter press solids operation is summarized in the table below.

Manifest Numbers	No. of Drums	Weight (kg)	Weight (lb)
014268765	6	1,058	2,328
014268999	8	1,776	3,907
2020 TOTALS	**14**	**2,834**	**6,235**

Treatment Method: Land Disposal at Chemical Waste Management, Inc. facility.

Disposal Destination: **Final Destination at:**

Waste Management, Inc.
Emelle Facility
Alabama Highway 17 at Mile Marker 163
Emelle, AL 35459

Drum Load

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
OHD 087433744	1	800.424.9300	014268765 JJK

5. Generator's Name and Mailing Address: Cross International, Inc. 5092 Abay Road Williamsburg, OH 45176
Generator's Phone: 513 724. 6114
Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc. — U.S. EPA ID Number: NYD 980769947

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management Inc. Alabama Hwy. 17 M.M. 163 Emelle, AL 35459 — U.S. EPA ID Number: ALD 000 622464
Facility's Phone: 205 652. 9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 375602	2	DM	186.36	K	F039		
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 404069	2	DM	458.96	K	F039		
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 3875	2	DM	372.72	K	F039		
	4.							

14. Special Handling Instructions and Additional Information
9a. Prof. # AL 375602 Prof. # AL 3875
Prof. # AL 404069

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Doug Kattenkel — Signature — Month 04 Day 30 Year 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Mike Nightengale — Signature — Month 04 Day 30 Year 20

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132	H141	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jessica Harris — Signature: Jessica Harris — Month 5 Day 01 Year 20

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Drum Load.

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number 014268765 JJK

GENERATOR

5. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Facility's Phone:

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. ALSTEC 2	2		126.36 X	126.36	
	2. NL-4-3409	2		498.96 X		
	3. AI 3875	2		373.79 X		
	4.					

14. Special Handling Instructions and Additional Information

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Doug Kittamaki — Signature — Month: 04 Day: 30 Year: 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month: 04 Day: 30 Year: 20

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name — Signature — Month — Day — Year

HAZMAT

ENVIRONMENTAL GROUP, INC
60 Commerce Drive, Buffalo, NY 14218
www.hazmatinc.com
FAX (716) 242-4558
(716) 827-7200

HAZMAT

NYDEC #9A-278
EPA ID# NYD980769947

DATE 887435 / /

PICK UP

SHIPPER

NAME Browning Ferris Ice Cos
STREET 5592 ABEC Rd
CITY Williamsburg STATE OH ZIP CODE
CONTACT NAME Rodg KATTwinkeC PHONE
SCHEDULED TIME 4-30-20

DELIVERY

CONSIGNEE

NAME Waste Management
STREET KTTT
CITY Emelle STATE AL ZIP CODE
CONTACT NAME PHONE

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at pickup site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

6 DM
SR #114503
#A13575

Pursuant to 6NYCRR 372.2 (b) (2) (iii) HazMat certifies that it is Authorized to deliver this shipment of manifested waste to the TSDF listed on this Bill of Lading. Shipment valuation limits apply from HazMat Rules Publication 101, Item 848.

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at delivery site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

WASEMG

PURCHASE ORDER NO.	WORK ORDER NUMBER	MANIFEST NUMBER	H.M. NUMBER
EN0077		014764765	491452

LOAD NUMBER	TRACTOR	TRAILER	ROLL OFF BOX	DRIVER NUMBER	DRIVER'S NAME
	681	3238		670	Whitfield

EQUIPMENT	MATERIAL DESCRIPTION/MANIFEST NUMBER	QUANTITY
EQUIPMENT TYPE ____ UNIT# DROPPED ____ UNIT# PICKED UP ____ CONDITION REPORT ____	B 9-3077	6

Product unloading station and/or tank approved by:

CONSIGNEE'S SIGNATURE

Compressor used YES _____ NO _____
In-Transit Heat used: YES _____ NO _____
Analysis/C of A: YES _____ NO _____

PICK UP

PICK UP DATE 4-30-20
ARRIVAL TIME 7 AM PM RELEASE TIME 7:30 AM PM
DAY #2 DATE _____
ARRIVAL TIME _____ AM PM RELEASE TIME _____ AM PM

TRAILER EMPTY UPON ARRIVAL ☐ YES
(if not, explain below—)
DIP MEASUREMENT (Tankers Only) _____ INCHES
COMMENTS: (EXPLAIN ALL DELAYS) _____
PU

HAZMAT MATERIALS USED (ex. overpacks, etc.): ☐ YES ☐ NO
IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

SHIPPER'S SIGNATURE 4-30-20 Date

DELIVERY

DRIVER _____ DAY #1 DATE _____
ARRIVAL TIME _____ AM PM RELEASE TIME _____ AM PM
DAY #2 DATE _____ ARRIVAL TIME _____ AM PM RELEASE TIME _____ AM PM
DAY #3 DATE _____ ARRIVAL TIME _____ AM PM RELEASE TIME _____ AM PM

TRAILER CLEAN AND EMPTY UPON DEPARTURE ☐ YES ☐ NO
(if not, explain below—)
COMMENTS: (Explain all delays or discrepancies)) _____

IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

CONSIGNEE'S SIGNATURE Date

HAZMAT BILL OF LADING GENERATOR COPY

20/07/98

LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM (PHASE IV)

FTA-AT3875

Generator Number: CECOS INTERNATIONAL INC Manifest Doc. No.: 014268765 SSK

Profile Number: AT3875 State Manifest No: _____

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Nonwastewater X Wastewater
2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent treatment standards are listed on the following page. If F039, multi-source leachate applies, those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

REF #	3. US EPA HAZARDOUS WASTE CODE(S)	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK NONE		5. HOW MUST THE WASTE BE MANAGED? ENTER LETTER FROM BELOW
		DESCRIPTION	NONE	
1	F039		X	A
2				
3				
4				

To identify F039 or D001-D043, underlying hazardous constituent(s), use the "F039/Underlying Hazardous Constituent Form" provided (CWM-2006) and check here: _____
If no UHCs are present in the waste upon its initial generation check here: X
To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (CWM-2003-B) and check here: _____

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, C, D or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4 or D, you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT
This waste must be treated to the applicable treatment standards set forth in 40 CFR 268.40.
For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR 268.40 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.2 (Certification removed by Phase IV.)

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS
"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

C. RESTRICTED WASTE SUBJECT TO A VARIANCE
This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
"I certify under penalty of law I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS
This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature _____ Title _____ Date 4-30-20

SOLVENT

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

SOLVENT WASTE TREATMENT STANDARDS [2]

F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Standard [1]		F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Standard [1]	
	Wastewaters	Nonwastewaters		Wastewaters	Nonwastewaters

[1] All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

[2] For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of constituents or less than 10 x the standards listed.

D001: SUBCATEGORY REFERENCE

A. Ignitable characteristic wastes, except for the 40 CFR 261.21(a)(1) High TOC subcategory.
B. High Toc Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a)(1) - Greater than or equal to 10% total organic carbon.

Drum #	DATE	WASTE Code		RISOW
3251	2-20-20	AL375602	debri	B.B.
3252	3-2-20	A13875	cake	B.B
3253	3-19-20	AL404069	sludge	B.B.
3254	3-19-20	AL404069	sludge	B.B.
3255	3-19-20	A13875	cake	B.B
3256	4-23-20	AL375602	debri	B.B.

Shipped 6 drums.

Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG,OH 45176

Site Infomation

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG,OH 45176

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generator Name: CECOS INTERNATIONAL INC
Enclosed is/are your Generator Number Two copy / copies for Alabama Manifest Numbers:

014268765JJK

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b), this letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approval waste profile submitted for this/these wastes.

As of September 26, 1997, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under a AHWMMA Permit, issued by the Alabama Department of Environmental Management. (RCRA)

Al Talbott
Safety Manager

May 14, 2020

Drum Load

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
OHD 087433744	1	800.424.9300	014268765 JJK

5. Generator's Name and Mailing Address: Cross International, Inc. 5092 Abay Road Williamsburg, OH 45176
Generator's Phone: 513 724. 6114
Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc. — U.S. EPA ID Number: NYD 980769947

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management Inc. Alabama Hwy. 17 M.M. 163 Emelle, AL 35459 — U.S. EPA ID Number: ALD 000 622464
Facility's Phone: 205 652. 9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 375602	2	DM	186.36	K	F039		
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 404069	2	DM	458.96	K	F039		
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 3875	2	DM	372.72	K	F039		
	4.							

14. Special Handling Instructions and Additional Information
9a. Prof. # AL 375602 Prof. # AL 3875
Prof. # AL 404069

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Doug Kattenkel — Signature — Month 04 Day 30 Year 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Mike Nightengale — Signature — Month 04 Day 30 Year 20

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132	H141	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jessica Harris — Signature: Jessica Harris — Month 5 Day 01 Year 20

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Drum Load

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
OHD 087433744	1	800.424.9300	014268765 JJK

5. Generator's Name and Mailing Address: Cross International, Inc. 5092 Abay Road Williamsburg, OH 45176
Generator's Phone: 513 724. 6114
Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc. — U.S. EPA ID Number: NYD 980769947

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management Inc. Alabama Hwy. 17 M.M. 163 Emelle, AL 35459 — U.S. EPA ID Number: ALD 000 622464
Facility's Phone: 205 652. 9721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 375602	2	DM	186.36	K	F039		
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 404069	2	DM	458.96	K	F039		
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL 3875	2	DM	372.72	K	F039		
	4.							

14. Special Handling Instructions and Additional Information
9a. Prof. # AL 375602 Prof. # AL 3875
Prof. # AL 404069

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Doug Kattenkel — Signature — Month 04 Day 30 Year 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Mike Nightengale — Signature — Month 04 Day 30 Year 20

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132	H141	H141	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jessica Harris — Signature: Jessica Harris — Month 5 Day 01 Year 20

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

WM
Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

Manifest Document Number:

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG, OH 45176

Site Information

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG, OH 45176

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. (ALD000622464) has received PCB material from
CECOS INTERNATIONAL INC

as described on Hazardous Waste Manifest Number 014268765JJK-1
Waste Management, Inc. hereby certifies that the above described material (excluding PCB liquids, if applicable) was landfilled on the dates shown below, in compliance with State and Federal Regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representation (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Al Talbott, Safety Manager
June 11, 2020

OSD	Unique ID	Cont #	Profile	Disposed	Description
2/20/20	3251	1	AL375602	6/3/20	LEACHATE CONTAMINATED DEBRIS
4/23/20	3256	2	AL375602	6/3/20	LEACHATE CONTAMINATED DEBRIS

WM
Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

Manifest Document Number:

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG, OH 45176

Site Information

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG, OH 45176

CONFIRMATION OF DESTRUCTION

Chemical Waste Management, Inc. (ALD000622464) has received PCB material from:
CECOS INTERNATIONAL INC
as described on Hazardous Waste Manifest Number 014268765JJK-2
This material was transhipped to a CWM approved facility for disposal. Chemical Waste Management, Inc. received confirmation that the PCB material was disposed of on the dates shown below, in compliance with State and Federal Regulations.

Al Talbott, Safety Manager

May 27, 2021

			Container Part Disposal Dates					
OSD	Unique ID	Profile	Solids	Liquid	Carcass	Flush	Sludge	Container Disposal Date
3/19/20	3253	AL404069		2/25/21				2/25/21
3/19/20	3254	AL404069		2/25/21				2/25/21

WM

Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

Manifest Document Number:

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG, OH 45176

Site Information

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG, OH 45176

CONFIRMATION OF DESTRUCTION

Chemical Waste Management, Inc. (ALD000622464) has received PCB material from:
CECOS INTERNATIONAL INC
as described on Hazardous Waste Manifest Number 014268765JJK-3
This material was transhipped to a CWM approved facility for disposal. Chemical Waste Management, Inc. received confirmation that the PCB material was disposed of on the dates shown below, in compliance with State and Federal Regulations.

Al Talbott, Safety Manager

May 27, 2021

			Container Part Disposal Dates					
OSD	Unique ID	Profile	Solids	Liquid	Carcass	Flush	Sludge	Container Disposal Date
3/19/20	3255	AI3875	2/25/21					2/25/21
3/2/20	3252	AI3875	2/25/21					2/25/21

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAD067433744 | 2. Page 1 of 1 | 3. Emergency Response Phone: 800 429 9300 | 4. Manifest Tracking Number: 014268999 JJK

5. Generator's Name and Mailing Address: Cross International, Inc. 5092 Abe Road Williamsburg, OH 45176
Generator's Site Address (if different than mailing address)
Generator's Phone: 513 724 6114

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc. | U.S. EPA ID Number: NYD 986769947

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management, Inc. Alabama Hwy. 17 M.M. 163 Emelle, AL 35459 | U.S. EPA ID Number: ALD000622464
Facility's Phone: 205.652.7721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL-404069	6	DM	1797 349.45	K	F039
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) ~~AL-38715~~ ~~AL-38715~~ AL-38715	1	DM	186.36	K	F039
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL-375602	1	DM	93.18	K	F039
	4.					

14. Special Handling Instructions and Additional Information
PA Prof.l.# AL 404069 Prof.l.# AL 375602
Prof.l.# PTA 13875

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Barry Beckett | Signature: Barry Beckett | Month 10 | Day 13 | Year 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES HURD | Signature: James Hurd | Month 10 | Day 13 | Year 20

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H132	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: DeWayne Hill | Signature | Month 10 | Day 14 | Year 20

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HAZMAT

ENVIRONMENTAL GROUP, INC
60 Commerce Drive, Buffalo, NY 14218
www.hazmatinc.com

FAX (716) 242-4558
(716) 827-7200

HAZMAT

NYDEC #9A-278
EPA ID# NYD980769947

DATE 10/27/20

PICK UP

SHIPPER

NAME: BROWNING FERRIS / CECOS
STREET: 5092 ABER ROAD
CITY: WILLIAMSBURG, STATE: OH ZIP CODE: 45176
CONTACT NAME: DAVE KATTWINKEL PHONE: 513 616 7034
SCHEDULED TIME: 10/13/20 @ 13:00-14:30

DELIVERY

CONSIGNEE

NAME: WASTE MANAGEMENT
STREET: 36964 ALABAMA 17
CITY: EMELLE, STATE: AL ZIP CODE: 35459
CONTACT NAME: JIM JUNKIN PHONE: 205 652 9711

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at pickup site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

1 DRUM PROFILE AL 375602
6 DRUMS PROFILE AL 4041069
1 DRUM PROFILE AL 3875

Pursuant to 6NYCRR 372.2 (b) (2) (iii) HazMat certifies that it is Authorized to deliver this shipment of manifested waste to the TSDF listed on this Bill of Lading. Shipment valuation limits apply from HazMat Rules Publication 101, Item 848.

ADDITIONAL INFORMATION / EQUIPMENT DAMAGE
If damaged at delivery site, did you send in Equipment Damage Report (EDR) via Qualcomm? Y N Explain damage below.

PURCHASE ORDER NO.	WORK ORDER NUMBER	MANIFEST NUMBER	H.M. NUMBER
		014268999JJK	495214

LOAD NUMBER	TRACTOR	TRAILER	ROLL OFF BOX	DRIVER NUMBER	DRIVER'S NAME
	713	B277		HURDJAM	JIM HURD

EQUIPMENT	MATERIAL DESCRIPTION/MANIFEST NUMBER	QUANTITY
EQUIPMENT TYPE ____ UNIT# DROPPED ____ UNIT# PICKED UP ____ CONDITION REPORT ____	8 PM NA3077 HAZARDOUS WASTE SOLID, N.O.S. CLASS 9	806 P

Product unloading station and/or tank approved by:

CONSIGNEE'S SIGNATURE

Compressor used YES ____ NO ____
In-Transit Heat used: YES ____ NO ____
Analysis/C of A: YES ____ NO ____

PICK UP

PICK UP DATE 10/13/20
ARRIVAL TIME 10:45 AM PM RELEASE TIME 11:45 AM PM
DAY #2 DATE ____
ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

TRAILER EMPTY UPON ARRIVAL ☑ YES
(if not, explain below—)
DIP MEASUREMENT (Tankers Only) ____ INCHES
COMMENTS: (EXPLAIN ALL DELAYS) ____
LOAD, SECURE, PLACARD
PAPERWORK

HAZMAT MATERIALS USED (ex. overpacks, etc.): ☐ YES ☐ NO
IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

SHIPPER'S SIGNATURE 10-13-20 Date

DELIVERY

DRIVER ____ DAY #1 DATE ____
ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM
DAY #2 DATE ____ ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM
DAY #3 DATE ____ ARRIVAL TIME ____ AM PM RELEASE TIME ____ AM PM

TRAILER CLEAN AND EMPTY UPON DEPARTURE ☐ YES ☐ NO
(if not, explain below—)
COMMENTS: (Explain all delays or discrepancies)) ____

IF YES EXPLAIN:

I, THE UNDERSIGNED, CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND COMPLETE.

CONSIGNEE'S SIGNATURE Date

HAZMAT BILL OF LADING GENERATOR COPY

Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG,OH 45176

Site Infomation

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG,OH 45176

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generator Name: CECOS INTERNATIONAL INC
Enclosed is/are your Generator Number Two copy / copies for Alabama Manifest Numbers:

014268999JJK

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b), this letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approval waste profile submitted for this/these wastes.

As of September 26, 1997, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under a AHWMMA Permit, issued by the Alabama Department of Environmental Management. (RCRA)

Al Talbott
Safety Manager

October 22, 2020

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAD067433744 | 2. Page 1 of 1 | 3. Emergency Response Phone: 800 429 9300 | 4. Manifest Tracking Number: 014268999 JJK

5. Generator's Name and Mailing Address: Cross International, Inc. 5092 Abe Road Williamsburg, OH 45176
Generator's Site Address (if different than mailing address)
Generator's Phone: 513 724 6114

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc. | U.S. EPA ID Number: NYD 986769947

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management, Inc. Alabama Hwy. 17 M.M. 163 Emelle, AL 35459 | U.S. EPA ID Number: ALD000622464
Facility's Phone: 205.652.7721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL-404069	6	DM	1797 349.45	K	F039
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) ~~AL-38715~~ ~~AL-38715~~ AL-38715	1	DM	186.36	K	F039
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL-375602	1	DM	93.18	K	F039
	4.					

14. Special Handling Instructions and Additional Information
PA Prof.l.# AL 404069 Prof.l.# AL 375602
Prof.l.# PTA 13875

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Barry Beckett | Signature: Barry Beckett | Month 10 | Day 13 | Year 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES HURD | Signature: James Hurd | Month 10 | Day 13 | Year 20

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H132	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: DeWayne Hill | Signature | Month 10 | Day 14 | Year 20

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAD067433744 | 2. Page 1 of 1 | 3. Emergency Response Phone: 800 429 9300 | 4. Manifest Tracking Number: 014268999 JJK

5. Generator's Name and Mailing Address: Cross International, Inc. 5092 Abe Road Williamsburg, OH 45176
Generator's Site Address (if different than mailing address)
Generator's Phone: 513 724 6114

6. Transporter 1 Company Name: Haz Mat Environmental Group, Inc. | U.S. EPA ID Number: NYD 986769947

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: Chemical Waste Management, Inc. Alabama Hwy. 17 M.M. 163 Emelle, AL 35459 | U.S. EPA ID Number: ALD000622464
Facility's Phone: 205.652.7721

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL-404069	6	DM	1797 349.45	K	F039
X	2. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) ~~AL-38715~~ ~~AL-38715~~ AL-38715	1	DM	186.36	K	F039
X	3. RQ, NA3077, Hazardous Waste Solid, N.O.S., 9, III, (F039, Polychlorinated Biphenyls) AL-375602	1	DM	93.18	K	F039
	4.					

14. Special Handling Instructions and Additional Information
PA Prof.l.# AL 404069 Prof.l.# AL 375602
Prof.l.# PTA 13875

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Barry Beckett | Signature: Barry Beckett | Month 10 | Day 13 | Year 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JAMES HURD | Signature: James Hurd | Month 10 | Day 13 | Year 20

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H141	H132	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: DeWayne Hill | Signature | Month 10 | Day 14 | Year 20

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

WM
Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

Manifest Document Number:

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG, OH 45176

Site Information

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG, OH 45176

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. (ALD000622464) has received PCB material from
CECOS INTERNATIONAL INC

as described on Hazardous Waste Manifest Number 014268999JJK-3
Waste Management, Inc. hereby certifies that the above described material (excluding PCB liquids, if applicable) was landfilled on the dates shown below, in compliance with State and Federal Regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representation (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Al Talbott /JB

Al Talbott, Safety Manager
November 12, 2020

OSD	Unique ID	Cont #	Profile	Disposed	Description
10/7/20	3264	1	AL375602	11/2/20	LEACHATE CONTAMINATED DEBRIS

WM
Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

Manifest Document Number:

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG, OH 45176

Site Information

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG, OH 45176

CERTIFICATE OF DISPOSAL

Chemical Waste Management, Inc. (ALD000622464) has received PCB material from
CECOS INTERNATIONAL INC

as described on Hazardous Waste Manifest Number 014268977JJK-2
Waste Management, Inc. hereby certifies that the above described material (excluding PCB liquids, if applicable) was landfilled on the dates shown below, in compliance with State and Federal Regulations.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representation (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.

Al Talbott, Safety Manager
March 22, 2021

OSD	Unique ID	Cont #	Profile	Disposed	Description
1/5/21	3267	1	AL375602	3/5/21	LEACHATE CONTAMINATED DEBRIS
11/2/20	3266	2	AL375602	3/5/21	LEACHATE CONTAMINATED DEBRIS

LTS CLEAN OUT

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	CHD087433744	1	(800)424-9300	006461653 GBF

GENERATOR

5. Generator's Name and Mailing Address
CECOS INTERNATIONAL INC
5092 ABER RD
WILLIAMSBURG OH 45176
Generator's Phone: (513)724-8111

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
EVERGREEN AES

U.S. EPA ID Number
TND981473945

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC
HIGHWAY 17 NORTH, MILE MARKER 163
EMELLE AL 35459
Facility's Phone: (205)652-9721

U.S. EPA ID Number
ALD000622464

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ,NA3082,HAZARDOUS WASTE,LIQUID,N.O.S.,9,III (F039) AL404069		DM	23	YD	F039
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1 ERG - 171
ERI PROVIDER CHEMTREC (CONTRACT CCN24117)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Timothy Bryant
Signature:
Month: 12 Day: 1 Year: 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name
Signature
Month Day Year

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name
Signature
Month Day Year

9/24/20 LAND DISPOSAL NOTIFICATION AND CERTIFICATION FORM (PHASE IV) EME-AL404069

Generator Name: CECOS INTERNATIONAL INC Manifest Doc. No.: 006461663 GBF

Profile Number: AL404069 State Manifest No: _____

1. Is this waste a non-wastewater or wastewater? (See 40 CFR 268.2) Check ONE: Nonwastewater X Wastewater _
2. Identify ALL USEPA hazardous waste codes that apply to this waste shipment, as defined by 40 CFR 261. For each waste code, identify the corresponding subcategory, or check NONE if the waste code has no subcategory. Spent solvent treatment standards are listed on the following page. If F039, multi-source leachate applies, those constituents must be listed and attached by the generator. If D001-D043 requires treatment of the characteristic and meet 268.48 standards, then the underlying hazardous constituent(s) present in the waste must be listed and attached.

REF #	3. US EPA HAZARDOUS WASTE CODE(S)	4. SUBCATEGORY ENTER THE SUBCATEGORY DESCRIPTION. IF NOT APPLICABLE, SIMPLY CHECK NONE		5. HOW MUST THE WASTE BE MANAGED? ENTER LETTER FROM BELOW
		DESCRIPTION	NONE	
1	F039	HAZARDOUS WASTE LIQUID	X	A
2				
3				
4				

To identify F039 or D001-D043, underlying hazardous constituent(s), use the "F039/Underlying Hazardous Constituent Form" provided (CWM-2004) and check here: _
If no UHCs are present in the waste upon its initial generation check here: X
To list additional USEPA waste code(s) and subcategorie(s), use the supplemental sheet provided (CWM-2005-D) and check here: _
Disposal facility monitors for all UHCs check here _
If waste will be managed in a system regulated under the CWA, or a Class 1 injection well under the SDWA check here _

HOW MUST THE WASTE BE MANAGED? In column 5 above, enter the letter (A, B1, B3, B4, B5, B6, C, D or E) below that describes how the waste must be managed to comply with the land disposal regulations (40 CFR 268.7). Please understand that if you enter the letter B1, B3, B4, B5, B6, or D you are making the appropriate certification as provided below. (States authorized by EPA to manage the LDR program may have regulatory citations different from the 40 CFR citations listed below. Where these regulatory citations differ, your certification will be deemed to refer to those state citations instead of the 40 CFR citations.

A. RESTRICTED WASTE REQUIRES TREATMENT
This waste must be treated to the applicable treatment standards set forth in 40 CFR 268.40.
__ For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45."

B.1 RESTRICTED WASTE TREATED TO PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in 40 CFR 268.40 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.3 GOOD FAITH ANALYTICAL CERTIFICATION FOR INCINERATED ORGANICS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion in units as specified in 268.42 Table 1. I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.4 DECHARACTERIZED WASTE REQUIRES TREATMENT FOR UNDERLYING HAZARDOUS CONSTITUENTS
"I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49, to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

B.6 RESTRICTED DEBRIS TREATED TO ALTERNATE PERFORMANCE STANDARDS
"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in 40 CFR 268.45 without impermissible dilution of the prohibited wastes. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

C. RESTRICTED WASTE SUBJECT TO A VARIANCE
This waste is subject to a national capacity variance, a treatability variance, or a case-by-case extension. Enter the effective date of prohibition in column 5 above.
__ For Hazardous Debris: "This hazardous debris is subject to the alternative treatment standards of 40 CFR Part 268.45."

D. RESTRICTED WASTE CAN BE LAND DISPOSED WITHOUT FURTHER TREATMENT
"I certify under penalty of law I have personally examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

E. WASTE IS NOT CURRENTLY SUBJECT TO PART 268 RESTRICTIONS
This waste is a newly identified waste that is not currently subject to any 40 CFR Part 268 restrictions.

I hereby certify that all information submitted in this and all associated documents is complete and accurate, to the best of my knowledge and information.

Signature X _____ Title X Tech Date X 12-1-20

SOLVENT

If the waste identified on the first page of this form is described by any of the following USEPA hazardous waste codes: F001, F002, F003, F004, F005, and all solvent constituents will not be monitored by the treater, then each constituent MUST be identified below by checking the appropriate box, and this page must accompany the shipment, along with the previous page of this form. If the waste code F039 describes this waste, then the corresponding list of constituents must be attached. If D001-D043 require treatment to 268.48 standards, then the underlying hazardous constituent(s) must also be attached.

SOLVENT WASTE TREATMENT STANDARDS[2]

F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Standard[1]		F001 through F005 spent solvent constituents and their associated USEPA hazardous waste code(s).	Treatment Standard[1]	
	Wastewaters	Nonwastewaters		Wastewaters	Nonwastewaters

1 All spent solvent treatment standards are measured through a total waste analysis (TCA), unless otherwise noted. Wastewater units are mg/l, nonwastewater are mg/kg.

2 For contaminated soils using the alternative soil treatment standards, the treatment standards for F001-F005 spent solvents must be a 90% reduction of constituents or less than 10 x the standards listed.

SUBCATEGORY REFERENCE

D001:

A. Ignitable characteristic wastes, except for the 40 CFR 261.21(a)(1) High TOC subcategory.

B. High TOC Ignitable characteristic liquids subcategory based on 40 CFR 261.21(a)(1) - Greater than or equal to 10% total organic carbon.

Chemical Waste Management
P.O. Box 55
36964 Alabama Hwy 17
Emelle, AL 35459-0055
(205)652-9721

CECOS INTERNATIONAL INC
5092 ABER ROAD

WILLIAMSBURG,OH 45176

Site Infomation

CECOS INTERNATIONAL INC
5092 ABER RD

WILLIAMSBURG,OH 45176

ACKNOWLEDGEMENT OF RECEIPT OF WASTE SHIPMENT

Generator Name: CECOS INTERNATIONAL INC
Enclosed is/are your Generator Number Two copy / copies for Alabama Manifest Numbers:

006461653GBF

This copy is to acknowledge that Chemical Waste Management, Inc., of Emelle, Alabama has received your shipment. As a requirement of 40 CFR 264.12 (b), this letter serves to inform you that this facility has the proper permits and will accept your shipment upon completion of waste analysis procedures specified in the facility's Waste Analysis Plan and as determined in the approval waste profile submitted for this/these wastes.

As of September 26, 1997, Chemical Waste Management, Inc., Emelle Alabama (ALD000622464) is operating under a AHWMMA Permit, issued by the Alabama Department of Environmental Management. (RCRA)

Al Talbott
Safety Manager

December 24, 2020

Please print or type. LTS CLEAN OUT

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CHD087433744	1	(800)424-9300	015421553 GBF

GENERATOR

5. Generator's Name and Mailing Address
CECOS INTERNATIONAL INC
5092 ABER RD
WILLIAMSBURG OH 45176
Generator's Phone: (513)724-3114

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: EVERGREEN AES
U.S. EPA ID Number: TND981473845

7. Transporter 2 Company Name: HPACO
U.S. EPA ID Number: NCD986194306

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
HIGHWAY 17 NORTH, MILE MARKER 193
EMELLE AL 35459
Facility's Phone: (205)652-9721
U.S. EPA ID Number: ALD000822484

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., 9, III (F039) AL404089	1	CM	20	YD	F039
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1 ERG - 171
ERI PROVIDER CHEMTREC (CONTRACT CCN24117)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Timothy Prewitt
Signature:
Month: 12 Day: 1 Year: 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Anthony Clark
Signature:
Month: 12 Day: 1 Year: 20

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: D. Walsha Hill
Signature:
Month: 12 Day: 8 Year: 20

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

CWMI

LTS CLEAN OUT

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
OHD087433744	1	(800)424-9300	006461653 GBF

GENERATOR

5. Generator's Name and Mailing Address
CECOS INTERNATIONAL INC
5092 ABER RD
WILLIAMSBURG OH 45176
Generator's Phone: (513)724-6114

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name
EVERGREEN AES

U.S. EPA ID Number
TND981473945

7. Transporter 2 Company Name
HepaCO

U.S. EPA ID Number
NCD986194306

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
HIGHWAY 17 NORTH, MILE MARKER 163
EMELLE AL 35459
Facility's Phone: (205)652-9721

U.S. EPA ID Number
ALD000622464

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. RQ,NA3082,HAZARDOUS WASTE,LIQUID,N.O.S.9,III (F039) AL404069	1	CM ~~RO~~	20	YD	F039		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1. ERG - 171

ERI PROVIDER CHEMTREC (CONTRACT CCN24117)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X Timothy Prewitt
Signature: X
Month: 12 Day: 1 Year: 20

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Anthony Clark
Signature:
Month: 12 Day: 1 Year: 20

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Natasha Hill
Signature:
Month: 12 Day: 2 Year: 20

EPA Form 8700-22 (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTEM

(68)

CWM, INC. - EMELLE ***** Receipt # 560716 ***** Page - 1

Date/Time In 12/02/20 7:37
Load Type Rolloff Federal EPA ID TND981473945
Transporter EVERGREEN AES
MURFREESBORO TN

** WEIGHT SUMMARY **
Gross 55000.00
Tare 35713.00
Net
Adj.
Adj. Net 19,288.00

Truck Number 00-3626 Trailer/Contnr #1 EG-257 #2 #3

Rcpt Ln#	Doc Ln#	Document Number	Profile Sales	Profile Invoicing	Generator Customer	Cnt #	Cnt Code	Total Quan.	W V	DCS Units	PCB	Sched Cat	Federal EPA Waste Status	ADEM #
1	1	006461653GBF	AL404069	CECOS INTERNATIONAL	WILLIAMSBURG OH	1	CM	20.00	Y	Cubic Ya	OSTB	FC	Check Restriction SUBCC Value - YES	ADEM Not Found

Doc Seq # 1 EME CECOS INTERNATIONAL INC P.O. Num COD Req'd
Scheduled Date 12/02/20 Time 08:00 1149662-1

Federal Waste Codes F039
>51% OR <51% DEBRIS (CIRCLE)
PREFILLED VAULT Y OR N (CIRCLE)
>51% OR <51% MAC 10% INSPECTION (CIRCLE)
BULK MATERIAL ONLY:
SAMPLED/INSPECTED_____ FREE LIQUIDS DETECTED? YES / NO
SELECT MATERIAL/NON-SELECT MATERIAL_____ WIND DISPERSAL MATERIAL? YES / NO

PHYSICAL DESCRIPTION OF WASTE:_____ SAMPLER/APPROVAL_____

SPOT SAMPLE:_____ B20- _____ PHYS. DESCRIPTION_____
RAD. SCREEN POS NEG
IGN. SCREEN POS NEG
H20 SOL. S F PT/SOL
H20 RXN/TEMP. INITIAL NO RXN REACTS
H20 RXN/TEMP. 5MIN. NO RXN REACTS
ph (PAPER)_____
CN SCREEN + - (PRUSSIAN BLUE)
CN SCREEN + - (CYANTESMO)
SULFIDE SCREEN + -
ADDITIONAL ANALYTICAL REQ'D? Y N
DESCRIBE:_____
PCB CONC.(PPM)_____ SULFIDE (9030)_____
%H20 BY KF_____ CYANIDE (9010C)_____ TAB WASTE Y N
PAINT FILTER TEST/ P F SPEC. GRAVITY_____ BNZ CONC.____PPM
COMMENTS:(SAFETY/OPERATIONAL)_____

COMPAT. TEST W/_____ ON___RXN__

ADD'L SPOT SAMPLE ATTACHED? Y N
DISPOSAL METHOD: S SP ST-3 ST-3/PT P-ST-3 P-ST-3/PT ST-5 ST-5/PT P-ST-5 S01-PTA B-PIN OTHER_____
P-ST-5/PT ST-8 ST-8/PT MIC MAC (MAC INSPECT) F INC SP-VS PCB-MAC P-MAC
P-ST-8 P-ST-8/PT VS-3 VS-5 VS-8
INDICATOR PARAMETER WILL BE CIRCLED
B-MAC LOADS REQUIRING INSPECTION THAT ARE FOUND TO BE LESS THAN 51% MUST
BE RETURNED TO LAB AND PLACED ON HOLD._____
RELEASED FOR DISPOSAL BY:_____ DATE:_____

= Robbie D. Wood, Inc. =

P.O. BOX 125 DOLOMITE, ALABAMA 35061

BILL OF LADING NO. MC 142393

BRDWT

SHIPPER RDW CWM			LOADING CITY/STATE Port Arthur TX	MANIFEST NO. 142393
CONSIGNEE CWM			DESTINATION Maple IA	
	TRACTOR NO. 5287	TRAILER NO. 1669	BOX NO. E9257	DATE SHIPPED 3-17
				LOAD NO 1346666

COMP NO	LOADING TEMP °F	COMMODITY	UNIT	QUANTITY
		Empty Box CWM		

QUANTITY	
	Gross
	Tare
	Net
	Tons

LOADING TIME — IN M. / OUT M. AUTHORIZATION - LOADING DEMURRAGE

DENTENTION RECORD — EXPLAIN TIME SPENT

UNLOADING TIME — IN M. / OUT M. AUTHORIZATION - UNLOADING DEMURRAGE

GOVERNED BY TARIFFS AND CLASSIFICATIONS ISSUED BY THE CARRIER AND/OR ITS AGENTS

SHIPPER PER —

CARRIER PER

RECEIVED THE ABOVE-DESCRIBED PROPERTY IN GOOD CONDITION EXCEPT AS NOTED

FIRM

BY

SHOW COMPLETE COMPANY NAME AND SIGNATURE INITIALS NOT ACCEPTED — DELIVERY DATE

White - R. D. W. Yellow - R. D. W. Pink - Consignee Goldenrod - Shipper

Val's Print 205.744.3386

ROBBIE D. WOOD, INC.

1346644

BOX OWNER RDW

ROLL-OFF BOX # E9257 SN# _____

TRACTOR # 5287

DRIVER SIGNATURE Lorenzo Brown

DRIVERS: WHEN FILLING OUT THIS FORM, WRITE ON HARD SURFACE, PRESS FIRMLY WITH BALL-POINT

LOAD # [redacted]

PICK-UP INFORMATION

DATE: 3-1-21 AM/PM

SHIPPER RDW

P/U CITY - ST. Port Arthur TX.

CUSTOMER SIGNATURE ✓

EMPTY ☑

LOADED ☐

MANIFEST # 142393

DELIVERY INFORMATION

DATE: 3-1-21 AM/PM

LOADED BOX

Unloaded at _____

Drop Loaded at _____

Box returned to: RDW

EMPTY BOX DELIVERED TO:

CONSIGNEE _____

CITY, ST _____

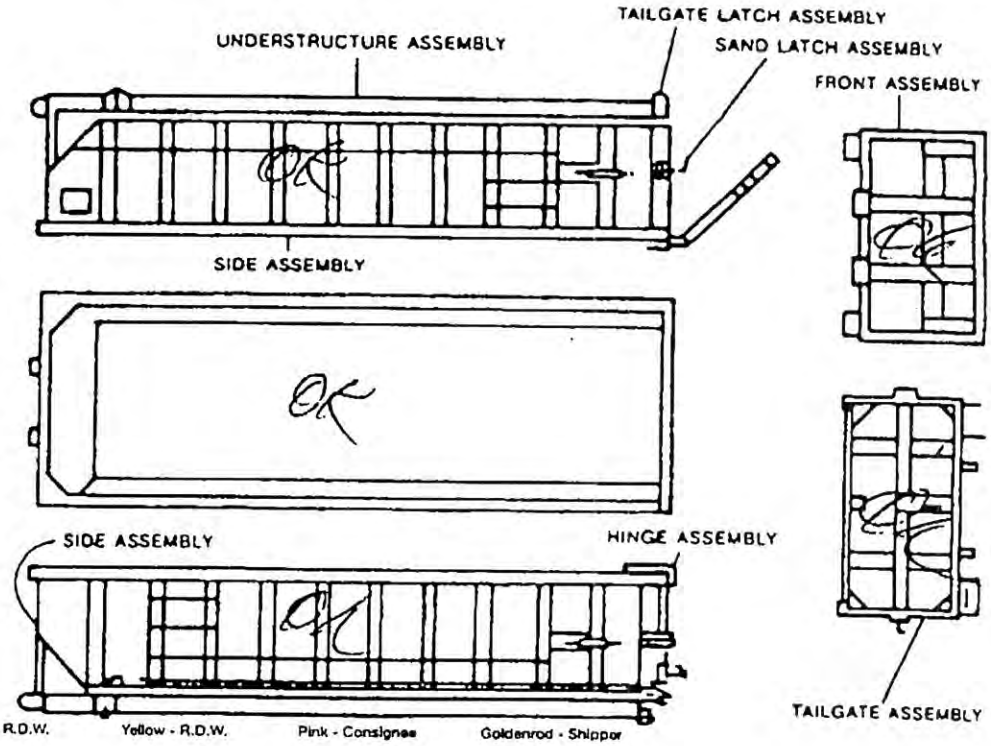
CUSTOMER SIGNATURE _____

Indicate below any damage done to roll-off box by circling that portion on the drawing below.

Condition of Tarp: _____

Condition of Bows: OK

No. Bows: _____



White - R.D.W. Yellow - R.D.W. Pink - Consignee Goldenrod - Shipper

SECTION V

RESULTS OF LTS BATCH SAMPLING

LEACHATE TREATMENT SYSTEM EFFLUENT
CECOS LANDFILL, WILLIAMSBURG, OHIO
2020 BATCH SAMPLING RESULTS

Sample Date	Total PCB Results (ug/L)
1/8/2020	614
1/9/2020	888
1/28/2020	5,330
2/4/2020	285
2/14/2020	442
2/21/2020	32
2/24/2020	99
3/5/2020	93
3/10/2020	2,760
3/11/2020	2,396
3/16/2020	310
3/20/2020	164
4/1/2020	1,678
4/2/2020	1,162
4/22/2020	228
4/28/2020	52
5/11/2020	263
5/22/2020	209
6/10/2020	392
6/24/2010	1,041
7/16/2020	394
7/28/2020	87
8/5/2020	128
8/28/2020	49
9/18/2020	130
10/13/2020	1,747
10/14/2020	577
10/21/2020	321
10/27/2020	935
11/10/2020	68
11/24/2020	2,050
12/10/2020	71
12/23/2020	605
12/29/2020	183

CERTIFICATE OF ANALYSIS

M0A0490

Analytical Testing Parameters

Client Sample ID: 21413-A
Sample Matrix: Aqueous
Lab Sample ID: M0A0490-01 **Collection Date:** 01/08/2020 0:01

Polychlorinated Biphenyls - GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		01/10/20 0946	01/13/20 1611	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		01/10/20 0946	01/13/20 1611	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		01/10/20 0946	01/13/20 1611	ECL
Aroclor-1242 (PCB-1242)	**235**	51.0	ug/L	100	**D3**	01/10/20 0946	01/13/20 1645	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		01/10/20 0946	01/13/20 1611	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		01/10/20 0946	01/13/20 1611	ECL
Aroclor-1260 (PCB-1260)	**379**	51.0	ug/L	100	**D3, Q2**	01/10/20 0946	01/13/20 1645	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**D3, S3**	01/10/20 0946	01/13/20 1645	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	41.0	Limit: 30-132	% Rec	1		01/10/20 0946	01/13/20 1611	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**D3, S3**	01/10/20 0946	01/13/20 1645	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	50.9	Limit: 30-130	% Rec	1		01/10/20 0946	01/13/20 1611	ECL

CERTIFICATE OF ANALYSIS

M0A0665

Analytical Testing Parameters

Client Sample ID: 21414-A
Sample Matrix: Aqueous
Lab Sample ID: M0A0665-01 **Collection Date:** 01/09/2020

Polychlorinated Biphenyls - GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		01/13/20 1146	01/14/20 2112	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		01/13/20 1146	01/14/20 2112	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		01/13/20 1146	01/14/20 2112	ECL
Aroclor-1242 (PCB-1242)	**369**	50.0	ug/L	100	**D3**	01/13/20 1146	01/14/20 2147	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		01/13/20 1146	01/14/20 2112	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		01/13/20 1146	01/14/20 2112	ECL
Aroclor-1260 (PCB-1260)	**519**	50.0	ug/L	100	**D3**	01/13/20 1146	01/14/20 2147	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**S3**	01/13/20 1146	01/14/20 2147	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	158	Limit: 30-132	% Rec	1	**S1**	01/13/20 1146	01/14/20 2112	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	01/13/20 1146	01/14/20 2147	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	130	Limit: 30-130	% Rec	1		01/13/20 1146	01/14/20 2112	ECL

CERTIFICATE OF ANALYSIS

M0A2023

Analytical Testing Parameters

Client Sample ID: 21415-A
Sample Matrix: Aqueous
Lab Sample ID: M0A2023-01 **Collection Date:** 01/28/2020 10:00

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<50.0	50.0	ug/L	100	**D3**	01/29/20 0900	01/30/20 1231	ECL
Aroclor-1221 (PCB-1221)	<50.0	50.0	ug/L	100	**D3**	01/29/20 0900	01/30/20 1231	ECL
Aroclor-1232 (PCB-1232)	<50.0	50.0	ug/L	100	**D3**	01/29/20 0900	01/30/20 1231	ECL
Aroclor-1242 (PCB-1242)	**2260**	500	ug/L	1,000	**D3**	01/29/20 0900	01/30/20 1602	ECL
Aroclor-1248 (PCB-1248)	<50.0	50.0	ug/L	100	**D3**	01/29/20 0900	01/30/20 1231	ECL
Aroclor-1254 (PCB-1254)	<50.0	50.0	ug/L	100	**D3**	01/29/20 0900	01/30/20 1231	ECL
Aroclor-1260 (PCB-1260)	**3070**	500	ug/L	1,000	**D3**	01/29/20 0900	01/30/20 1602	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	1,000	**D3, S3**	01/29/20 0900	01/30/20 1602	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	437	Limit: 30-132	% Rec	100	**D3, S3**	01/29/20 0900	01/30/20 1231	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	1,000	**D3, S3**	01/29/20 0900	01/30/20 1602	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**D3, S3**	01/29/20 0900	01/30/20 1231	ECL

CERTIFICATE OF ANALYSIS

M0B0255

Analytical Testing Parameters

Client Sample ID: 21416-R
Sample Matrix: Aqueous
Lab Sample ID: M0B0255-01 **Collection Date:** 02/04/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		02/06/20 1035	02/06/20 2051	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		02/06/20 1035	02/06/20 2051	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		02/06/20 1035	02/06/20 2051	ECL
Aroclor-1242 (PCB-1242)	**120**	10.0	ug/L	20	**D3**	02/06/20 1035	02/07/20 1403	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		02/06/20 1035	02/06/20 2051	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		02/06/20 1035	02/06/20 2051	ECL
Aroclor-1260 (PCB-1260)	**165**	10.0	ug/L	20	**D3**	02/06/20 1035	02/07/20 1403	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	113	Limit: 30-132	% Rec	20	**S3**	02/06/20 1035	02/07/20 1403	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	33.6	Limit: 30-132	% Rec	1		02/06/20 1035	02/06/20 2051	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	20	**S3**	02/06/20 1035	02/07/20 1403	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	139	Limit: 30-130	% Rec	1	**S1**	02/06/20 1035	02/06/20 2051	ECL

CERTIFICATE OF ANALYSIS

M0B1309

Analytical Testing Parameters

Client Sample ID: 21417-A
Sample Matrix: Aqueous
Lab Sample ID: M0B1309-01 **Collection Date:** 02/14/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1	**Q2**	02/19/20 0911	02/20/20 1959	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1	**Q2**	02/19/20 0911	02/20/20 1959	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1	**Q2**	02/19/20 0911	02/20/20 1959	ECL
Aroclor-1242 (PCB-1242)	**128**	5.00	ug/L	10	**D3, Q1**	02/19/20 0911	02/20/20 2016	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1	**Q2**	02/19/20 0911	02/20/20 1959	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1	**Q2**	02/19/20 0911	02/20/20 1959	ECL
Aroclor-1260 (PCB-1260)	**314**	50.0	ug/L	100	**D3, Q1**	02/19/20 0911	02/20/20 2033	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	110	Limit: 30-132	% Rec	1		02/19/20 0911	02/20/20 1959	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	130	Limit: 30-132	% Rec	10	**D3**	02/19/20 0911	02/20/20 2016	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	181	Limit: 30-132	% Rec	100	**D3, S3**	02/19/20 0911	02/20/20 2033	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	196	Limit: 30-130	% Rec	1	**S1**	02/19/20 0911	02/20/20 1959	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	187	Limit: 30-130	% Rec	10	**D3, S1**	02/19/20 0911	02/20/20 2016	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**D3, S3**	02/19/20 0911	02/20/20 2033	ECL

CERTIFICATE OF ANALYSIS

M0B1825

Analytical Testing Parameters

Client Sample ID: 21419-A
Sample Matrix: Aqueous
Lab Sample ID: M0B1825-01 **Collection Date:** 02/21/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1831	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1831	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1831	ECL
Aroclor-1242 (PCB-1242)	**12.3**	0.500	ug/L	1		02/27/20 0845	02/27/20 1831	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1831	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1831	ECL
Aroclor-1260 (PCB-1260)	**19.4**	0.500	ug/L	1		02/27/20 0845	02/27/20 1831	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	244	Limit: 30-132	% Rec	1	**S1**	02/27/20 0845	02/27/20 1831	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	10.9	Limit: 30-130	% Rec	1	**S2**	02/27/20 0845	02/27/20 1831	ECL

CERTIFICATE OF ANALYSIS

M0B1824

Analytical Testing Parameters

Client Sample ID: 21420-A
Sample Matrix: Aqueous
Lab Sample ID: M0B1824-01 **Collection Date:** 02/24/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1814	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1814	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1814	ECL
Aroclor-1242 (PCB-1242)	**43.2**	5.00	ug/L	10	**D3**	02/27/20 0845	02/28/20 1250	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1814	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		02/27/20 0845	02/27/20 1814	ECL
Aroclor-1260 (PCB-1260)	**55.4**	5.00	ug/L	10	**D3**	02/27/20 0845	02/28/20 1250	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	107	Limit: 30-132	% Rec	1		02/27/20 0845	02/27/20 1814	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	84.8	Limit: 30-132	% Rec	10	**D3**	02/27/20 0845	02/28/20 1250	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	160	Limit: 30-130	% Rec	1	**S1**	02/27/20 0845	02/27/20 1814	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	225	Limit: 30-130	% Rec	10	**D3, S1**	02/27/20 0845	02/28/20 1250	ECL

CERTIFICATE OF ANALYSIS

M0C0516

Analytical Testing Parameters

Client Sample ID: 21421-A
Sample Matrix: Aqueous
Lab Sample ID: M0C0516-01 **Collection Date:** 03/05/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		03/11/20 0930	03/11/20 1711	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		03/11/20 0930	03/11/20 1711	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		03/11/20 0930	03/11/20 1711	ECL
Aroclor-1242 (PCB-1242)	**32.9**	5.00	ug/L	10	**D3**	03/11/20 0930	03/13/20 2210	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		03/11/20 0930	03/11/20 1711	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		03/11/20 0930	03/11/20 1711	ECL
Aroclor-1260 (PCB-1260)	**60.1**	5.00	ug/L	10	**D3**	03/11/20 0930	03/13/20 2210	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	29.0	Limit: 30-132	% Rec	1	**S2**	03/11/20 0930	03/11/20 1711	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	153	Limit: 30-132	% Rec	10	**D3, S1**	03/11/20 0930	03/13/20 2210	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	24.4	Limit: 30-130	% Rec	1	**S2**	03/11/20 0930	03/11/20 1711	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	27.1	Limit: 30-130	% Rec	10	**D3, S2**	03/11/20 0930	03/13/20 2210	ECL

CERTIFICATE OF ANALYSIS

M0C0964

Analytical Testing Parameters

Client Sample ID: 21422-A
Sample Matrix: Aqueous
Lab Sample ID: M0C0964-01 **Collection Date:** 03/10/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1941	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1941	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1941	ECL
Aroclor-1242 (PCB-1242)	**1160**	500	ug/L	1,000	**D3**	03/16/20 1045	03/17/20 1229	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1941	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1941	ECL
Aroclor-1260 (PCB-1260)	**1600**	500	ug/L	1,000	**D3**	03/16/20 1045	03/17/20 1229	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	308	Limit: 30-132	% Rec	1	**S1**	03/16/20 1045	03/16/20 1941	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	1,000	**D3, S3**	03/16/20 1045	03/17/20 1229	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	222	Limit: 30-130	% Rec	1	**S1**	03/16/20 1045	03/16/20 1941	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	1,000	**D3, S3**	03/16/20 1045	03/17/20 1229	ECL

CERTIFICATE OF ANALYSIS

M0C0965

Analytical Testing Parameters

Client Sample ID: 21423-A
Sample Matrix: Aqueous
Lab Sample ID: M0C0965-01 **Collection Date:** 03/11/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1958	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1958	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1958	ECL
Aroclor-1242 (PCB-1242)	**1560**	500	ug/L	1,000	**D3**	03/16/20 1045	03/17/20 1246	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1958	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		03/16/20 1045	03/16/20 1958	ECL
Aroclor-1260 (PCB-1260)	**2240**	500	ug/L	1,000	**D3**	03/16/20 1045	03/17/20 1246	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	175	Limit: 30-132	% Rec	1	**S1**	03/16/20 1045	03/16/20 1958	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	1,000	**D3, S3**	03/16/20 1045	03/17/20 1246	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	432	Limit: 30-130	% Rec	1	**S1**	03/16/20 1045	03/16/20 1958	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	1,000	**D3, S3**	03/16/20 1045	03/17/20 1246	ECL

CERTIFICATE OF ANALYSIS

M0C1277

Analytical Testing Parameters

Client Sample ID: 21424-A
Sample Matrix: Aqueous
Lab Sample ID: M0C1277-01 **Collection Date:** 03/16/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		03/19/20 0915	03/19/20 1802	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		03/19/20 0915	03/19/20 1802	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		03/19/20 0915	03/19/20 1802	ECL
Aroclor-1242 (PCB-1242)	**96.1**	5.00	ug/L	10	**D3**	03/19/20 0915	03/19/20 1819	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		03/19/20 0915	03/19/20 1802	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		03/19/20 0915	03/19/20 1802	ECL
Aroclor-1260 (PCB-1260)	**214**	50.0	ug/L	100	**D3**	03/19/20 0915	03/19/20 1837	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	263	Limit: 30-132	% Rec	1	**S1**	03/19/20 0915	03/19/20 1802	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	215	Limit: 30-132	% Rec	10	**D3, S1**	03/19/20 0915	03/19/20 1819	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**D3, S3**	03/19/20 0915	03/19/20 1837	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	64.3	Limit: 30-130	% Rec	1		03/19/20 0915	03/19/20 1802	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	61.2	Limit: 30-130	% Rec	10	**D3**	03/19/20 0915	03/19/20 1819	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**D3, S3**	03/19/20 0915	03/19/20 1837	ECL

CERTIFICATE OF ANALYSIS

M0C1530

Analytical Testing Parameters

Client Sample ID: 21425-A
Sample Matrix: Aqueous
Lab Sample ID: M0C1530-01 **Collection Date:** 03/20/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1727	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1727	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1727	ECL
Aroclor-1242 (PCB-1242)	**28.8**	5.10	ug/L	10	**D3**	03/24/20 1000	03/24/20 1744	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1727	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1727	ECL
Aroclor-1260 (PCB-1260)	**51.0**	5.10	ug/L	10	**D3**	03/24/20 1000	03/24/20 1744	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	240	Limit: 30-132	% Rec	1	**S1**	03/24/20 1000	03/24/20 1727	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	193	Limit: 30-132	% Rec	10	**D3, S1**	03/24/20 1000	03/24/20 1744	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	37.9	Limit: 30-130	% Rec	1		03/24/20 1000	03/24/20 1727	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	44.4	Limit: 30-130	% Rec	10	**D3**	03/24/20 1000	03/24/20 1744	ECL

CERTIFICATE OF ANALYSIS

M0C1531

Analytical Testing Parameters

Client Sample ID: 21426-A
Sample Matrix: Aqueous
Lab Sample ID: M0C1531-01 **Collection Date:** 03/20/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1836	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1836	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1836	ECL
Aroclor-1242 (PCB-1242)	**30.9**	5.10	ug/L	10	**D3**	03/24/20 1000	03/24/20 1853	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1836	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		03/24/20 1000	03/24/20 1836	ECL
Aroclor-1260 (PCB-1260)	**53.7**	5.10	ug/L	10	**D3**	03/24/20 1000	03/24/20 1853	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	228	Limit: 30-132	% Rec	1	**S1**	03/24/20 1000	03/24/20 1836	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	195	Limit: 30-132	% Rec	10	**D3, S1**	03/24/20 1000	03/24/20 1853	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	39.3	Limit: 30-130	% Rec	1		03/24/20 1000	03/24/20 1836	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	44.1	Limit: 30-130	% Rec	10	**D3**	03/24/20 1000	03/24/20 1853	ECL

CERTIFICATE OF ANALYSIS

M0D0239

Analytical Testing Parameters

Client Sample ID: 21427-A
Sample Matrix: Aqueous
Lab Sample ID: M0D0239-01 **Collection Date:** 04/01/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1901	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1901	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1901	ECL
Aroclor-1242 (PCB-1242)	**735**	50.0	ug/L	100		04/06/20 1106	04/06/20 1935	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1901	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1901	ECL
Aroclor-1260 (PCB-1260)	**943**	50.0	ug/L	100		04/06/20 1106	04/06/20 1935	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	155	Limit: 30-132	% Rec	1	**S1**	04/06/20 1106	04/06/20 1901	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	293	Limit: 30-132	% Rec	100	**S1**	04/06/20 1106	04/06/20 1935	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	1460	Limit: 30-130	% Rec	1	**S1**	04/06/20 1106	04/06/20 1901	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S1**	04/06/20 1106	04/06/20 1935	ECL

CERTIFICATE OF ANALYSIS
M0D0237

Analytical Testing Parameters

Client Sample ID: 21428-A
Sample Matrix: Aqueous
Lab Sample ID: M0D0237-01 **Collection Date:** 04/02/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1809	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1809	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1809	ECL
Aroclor-1242 (PCB-1242)	**456**	50.0	ug/L	100	**D3**	04/06/20 1106	04/06/20 1843	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1809	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		04/06/20 1106	04/06/20 1809	ECL
Aroclor-1260 (PCB-1260)	**706**	50.0	ug/L	100	**D3**	04/06/20 1106	04/06/20 1843	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	92.0	Limit: 30-132	% Rec	1		04/06/20 1106	04/06/20 1809	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**S3**	04/06/20 1106	04/06/20 1843	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	500	Limit: 30-130	% Rec	1	**S1**	04/06/20 1106	04/06/20 1809	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	04/06/20 1106	04/06/20 1843	ECL

CERTIFICATE OF ANALYSIS

M0D1729

Analytical Testing Parameters

Client Sample ID: 21429-A
Sample Matrix: Aqueous
Lab Sample ID: M0D1729-01 **Collection Date:** 04/22/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<10.2	10.2	ug/L	20	**D3**	04/25/20 0945	04/29/20 1527	ECL
Aroclor-1221 (PCB-1221)	<10.2	10.2	ug/L	20	**D3**	04/25/20 0945	04/29/20 1527	ECL
Aroclor-1232 (PCB-1232)	<10.2	10.2	ug/L	20	**D3**	04/25/20 0945	04/29/20 1527	ECL
Aroclor-1242 (PCB-1242)	**90.5**	10.2	ug/L	20	**D3**	04/25/20 0945	04/29/20 1527	ECL
Aroclor-1248 (PCB-1248)	<10.2	10.2	ug/L	20	**D3**	04/25/20 0945	04/29/20 1527	ECL
Aroclor-1254 (PCB-1254)	<10.2	10.2	ug/L	20	**D3**	04/25/20 0945	04/29/20 1527	ECL
Aroclor-1260 (PCB-1260)	**137**	10.2	ug/L	20	**D3**	04/25/20 0945	04/29/20 1527	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	91.0	Limit: 30-132	% Rec	20	**D3, S3**	04/25/20 0945	04/29/20 1527	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	20	**D3, S3**	04/25/20 0945	04/29/20 1527	ECL

CERTIFICATE OF ANALYSIS

M0D2044

Analytical Testing Parameters

Client Sample ID: 21430-A
Sample Matrix: Aqueous
Lab Sample ID: M0D2044-01 **Collection Date:** 04/28/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		05/05/20 1100	05/06/20 1213	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		05/05/20 1100	05/06/20 1213	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		05/05/20 1100	05/06/20 1213	ECL
Aroclor-1242 (PCB-1242)	**19.6**	2.55	ug/L	5		05/05/20 1100	05/06/20 1237	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		05/05/20 1100	05/06/20 1213	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		05/05/20 1100	05/06/20 1213	ECL
Aroclor-1260 (PCB-1260)	**32.0**	2.55	ug/L	5		05/05/20 1100	05/06/20 1237	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	143	Limit: 30-132	% Rec	1	**S1**	05/05/20 1100	05/06/20 1213	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	117	Limit: 30-132	% Rec	5		05/05/20 1100	05/06/20 1237	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	15.3	Limit: 30-130	% Rec	1	**S2**	05/05/20 1100	05/06/20 1213	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	16.1	Limit: 30-130	% Rec	5	**S2**	05/05/20 1100	05/06/20 1237	ECL

CERTIFICATE OF ANALYSIS

M0E0872

Analytical Testing Parameters

Client Sample ID: 21431-a
Sample Matrix: Aqueous
Lab Sample ID: M0E0872-01 **Collection Date:** 05/11/2020

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		05/15/20 1111	05/18/20 0025	CAS
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		05/15/20 1111	05/18/20 0025	CAS
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		05/15/20 1111	05/18/20 0025	CAS
Aroclor-1242 (PCB-1242)	**98.0**	10.2	ug/L	20		05/15/20 1111	05/22/20 1151	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		05/15/20 1111	05/18/20 0025	CAS
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		05/15/20 1111	05/18/20 0025	CAS
Aroclor-1260 (PCB-1260)	**165**	10.2	ug/L	20		05/15/20 1111	05/22/20 1151	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	97.4	Limit: 30-132	% Rec	1		05/15/20 1111	05/18/20 0025	CAS
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	20	**S3**	05/15/20 1111	05/22/20 1151	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	76.4	Limit: 30-130	% Rec	1		05/15/20 1111	05/18/20 0025	CAS
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	20	**S3**	05/15/20 1111	05/22/20 1151	ECL

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CERTIFICATE OF ANALYSIS

M0E1813

Analytical Testing Parameters

Client Sample ID: 21432-A
Sample Matrix: Aqueous
Lab Sample ID: M0E1813-01 **Collection Date:** 05/22/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		05/27/20 0910	05/28/20 1303	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		05/27/20 0910	05/28/20 1303	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		05/27/20 0910	05/28/20 1303	ECL
Aroclor-1242 (PCB-1242)	**81.9**	5.00	ug/L	10	**D3**	05/27/20 0910	05/28/20 1320	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		05/27/20 0910	05/28/20 1303	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		05/27/20 0910	05/28/20 1303	ECL
Aroclor-1260 (PCB-1260)	**127**	5.00	ug/L	10	**D3**	05/27/20 0910	05/28/20 1320	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	115	Limit: 30-132	% Rec	1		05/27/20 0910	05/28/20 1303	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	113	Limit: 30-132	% Rec	10	**D3**	05/27/20 0910	05/28/20 1320	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	249	Limit: 30-130	% Rec	1	**S1**	05/27/20 0910	05/28/20 1303	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	271	Limit: 30-130	% Rec	10	**D3, S1**	05/27/20 0910	05/28/20 1320	ECL

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CERTIFICATE OF ANALYSIS

M0F1070

Analytical Testing Parameters

Client Sample ID: 21433-A
Sample Matrix: Aqueous
Lab Sample ID: M0F1070-01 **Collection Date:** 06/10/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1517	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1517	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1517	ECL
Aroclor-1242 (PCB-1242)	**44.3**	5.00	ug/L	10	**D3**	06/15/20 0822	06/16/20 1534	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1517	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1517	ECL
Aroclor-1260 (PCB-1260)	**74.8**	5.00	ug/L	10	**D3**	06/15/20 0822	06/16/20 1534	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	113	Limit: 30-132	% Rec	1		06/15/20 0822	06/16/20 1517	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	104	Limit: 30-132	% Rec	10	**D3**	06/15/20 0822	06/16/20 1534	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	130	Limit: 30-130	% Rec	1		06/15/20 0822	06/16/20 1517	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	117	Limit: 30-130	% Rec	10	**D3**	06/15/20 0822	06/16/20 1534	ECL

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CERTIFICATE OF ANALYSIS

M0F1069

Analytical Testing Parameters

Client Sample ID: 21434-A
Sample Matrix: Aqueous
Lab Sample ID: M0F1069-01 **Collection Date:** 06/10/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1408	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1408	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1408	ECL
Aroclor-1242 (PCB-1242)	**101**	5.00	ug/L	10	**D3**	06/15/20 0822	06/16/20 1425	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1408	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		06/15/20 0822	06/16/20 1408	ECL
Aroclor-1260 (PCB-1260)	**172**	5.00	ug/L	10	**D3**	06/15/20 0822	06/16/20 1425	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	109	Limit: 30-132	% Rec	1		06/15/20 0822	06/16/20 1408	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	110	Limit: 30-132	% Rec	10	**D3**	06/15/20 0822	06/16/20 1425	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	195	Limit: 30-130	% Rec	1	**S1**	06/15/20 0822	06/16/20 1408	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	202	Limit: 30-130	% Rec	10	**D3, S1**	06/15/20 0822	06/16/20 1425	ECL

CERTIFICATE OF ANALYSIS

M0F2020

Analytical Testing Parameters

Client Sample ID: 21435-A
Sample Matrix: Aqueous
Lab Sample ID: M0F2020-01 **Collection Date:** 06/24/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.505	0.505	ug/L	1		06/30/20 1036	06/30/20 1747	ECL
Aroclor-1221 (PCB-1221)	<0.505	0.505	ug/L	1		06/30/20 1036	06/30/20 1747	ECL
Aroclor-1232 (PCB-1232)	<0.505	0.505	ug/L	1		06/30/20 1036	06/30/20 1747	ECL
Aroclor-1242 (PCB-1242)	**382**	50.5	ug/L	100	**D3**	06/30/20 1036	06/30/20 1822	ECL
Aroclor-1248 (PCB-1248)	<0.505	0.505	ug/L	1		06/30/20 1036	06/30/20 1747	ECL
Aroclor-1254 (PCB-1254)	<0.505	0.505	ug/L	1		06/30/20 1036	06/30/20 1747	ECL
Aroclor-1260 (PCB-1260)	**659**	50.5	ug/L	100	**D3**	06/30/20 1036	06/30/20 1822	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	101	Limit: 30-132	% Rec	1		06/30/20 1036	06/30/20 1747	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**D3, S3**	06/30/20 1036	06/30/20 1822	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	75.5	Limit: 30-130	% Rec	1		06/30/20 1036	06/30/20 1747	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**D3, S3**	06/30/20 1036	06/30/20 1822	ECL

CERTIFICATE OF ANALYSIS

M0G1287

Analytical Testing Parameters

Client Sample ID: 21437-A
Sample Matrix: Aqueous
Lab Sample ID: M0G1287-01 **Collection Date:** 07/16/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		07/21/20 1100	07/22/20 1317	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		07/21/20 1100	07/22/20 1317	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		07/21/20 1100	07/22/20 1317	ECL
Aroclor-1242 (PCB-1242)	**186**	50.0	ug/L	100	**D3**	07/21/20 1100	07/22/20 1352	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		07/21/20 1100	07/22/20 1317	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		07/21/20 1100	07/22/20 1317	ECL
Aroclor-1260 (PCB-1260)	**208**	50.0	ug/L	100	**D3**	07/21/20 1100	07/22/20 1352	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	127	Limit: 30-132	% Rec	1		07/21/20 1100	07/22/20 1317	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	269	Limit: 30-132	% Rec	100	**D3, S3**	07/21/20 1100	07/22/20 1352	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	343	Limit: 30-130	% Rec	1	**S4**	07/21/20 1100	07/22/20 1317	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**D3, S3**	07/21/20 1100	07/22/20 1352	ECL

CERTIFICATE OF ANALYSIS

M0G2110

Analytical Testing Parameters

Client Sample ID: 21436A
Sample Matrix: Aqueous
Lab Sample ID: M0G2110-01 **Collection Date:** 07/28/2020

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		07/31/20 0900	07/31/20 1807	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		07/31/20 0900	07/31/20 1807	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		07/31/20 0900	07/31/20 1807	ECL
Aroclor-1242 (PCB-1242)	**31.8**	5.00	ug/L	10		07/31/20 0900	08/01/20 1359	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		07/31/20 0900	07/31/20 1807	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		07/31/20 0900	07/31/20 1807	ECL
Aroclor-1260 (PCB-1260)	**55.6**	5.00	ug/L	10		07/31/20 0900	08/01/20 1359	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	823	Limit: 30-132	% Rec	1	**S1**	07/31/20 0900	07/31/20 1807	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	1040	Limit: 30-132	% Rec	10	**S1**	07/31/20 0900	08/01/20 1359	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	13.9	Limit: 30-130	% Rec	1	**S2**	07/31/20 0900	07/31/20 1807	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	68.7	Limit: 30-130	% Rec	10		07/31/20 0900	08/01/20 1359	ECL

CERTIFICATE OF ANALYSIS

M0H0270

Analytical Testing Parameters

Client Sample ID: 21438-A
Sample Matrix: Aqueous
Lab Sample ID: M0H0270-01 **Collection Date:** 08/05/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		08/10/20 0945	08/10/20 2157	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		08/10/20 0945	08/10/20 2157	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		08/10/20 0945	08/10/20 2157	ECL
Aroclor-1242 (PCB-1242)	**89.7**	5.00	ug/L	10		08/10/20 0945	08/10/20 2215	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		08/10/20 0945	08/10/20 2157	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		08/10/20 0945	08/10/20 2157	ECL
Aroclor-1260 (PCB-1260)	**38.1**	5.00	ug/L	10		08/10/20 0945	08/10/20 2215	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	222	Limit: 30-132	% Rec	1	**S1**	08/10/20 0945	08/10/20 2157	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	292	Limit: 30-132	% Rec	10	**S1**	08/10/20 0945	08/10/20 2215	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	258	Limit: 30-130	% Rec	1	**S1**	08/10/20 0945	08/10/20 2157	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	347	Limit: 30-130	% Rec	10	**S1**	08/10/20 0945	08/10/20 2215	ECL

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CERTIFICATE OF ANALYSIS

M0I0196

Analytical Testing Parameters

Client Sample ID: 21439-A
Sample Matrix: Aqueous
Lab Sample ID: M0I0196-01 **Collection Date:** 08/28/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		09/03/20 0844	09/04/20 1440	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		09/03/20 0844	09/04/20 1440	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		09/03/20 0844	09/04/20 1440	ECL
Aroclor-1242 (PCB-1242)	**22.8**	5.10	ug/L	10		09/03/20 0844	09/04/20 1458	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		09/03/20 0844	09/04/20 1440	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		09/03/20 0844	09/04/20 1440	ECL
Aroclor-1260 (PCB-1260)	**25.7**	5.10	ug/L	10		09/03/20 0844	09/04/20 1458	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	125	Limit: 30-132	% Rec	1		09/03/20 0844	09/04/20 1440	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	136	Limit: 30-132	% Rec	10	**S1**	09/03/20 0844	09/04/20 1458	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	23.7	Limit: 30-130	% Rec	1	**S2**	09/03/20 0844	09/04/20 1440	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	25.2	Limit: 30-130	% Rec	10	**S2**	09/03/20 0844	09/04/20 1458	ECL

CERTIFICATE OF ANALYSIS

M0I1921

Analytical Testing Parameters

Client Sample ID: 21440-A
Sample Matrix: Aqueous
Lab Sample ID: M0I1921-01 **Collection Date:** 09/18/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.510	0.510	ug/L	1		09/25/20 1130	09/29/20 1627	ECL
Aroclor-1221 (PCB-1221)	<0.510	0.510	ug/L	1		09/25/20 1130	09/29/20 1627	ECL
Aroclor-1232 (PCB-1232)	<0.510	0.510	ug/L	1		09/25/20 1130	09/29/20 1627	ECL
Aroclor-1242 (PCB-1242)	**61.6**	5.10	ug/L	10		09/25/20 1130	09/30/20 1214	ECL
Aroclor-1248 (PCB-1248)	<0.510	0.510	ug/L	1		09/25/20 1130	09/29/20 1627	ECL
Aroclor-1254 (PCB-1254)	<0.510	0.510	ug/L	1		09/25/20 1130	09/29/20 1627	ECL
Aroclor-1260 (PCB-1260)	**68.6**	5.10	ug/L	10		09/25/20 1130	09/30/20 1214	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	167	Limit: 30-132	% Rec	1	**S1**	09/25/20 1130	09/29/20 1627	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	174	Limit: 30-132	% Rec	10	**S1**	09/25/20 1130	09/30/20 1214	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	29.2	Limit: 30-130	% Rec	1	**S2**	09/25/20 1130	09/29/20 1627	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	54.1	Limit: 30-130	% Rec	10		09/25/20 1130	09/30/20 1214	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0I1419	B0I1419-BLK1	
		B0I1419-BS1	
		B0I1419-BSD1	
		M0I1921-01	21440-A
		M0I1921-01RE1	21440-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0I1419 - 3510C_8082 - EPA 8082A										
Blank (B0I1419-BLK1)			Prepared: 09/25/2020 Analyzed: 09/29/2020							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.160*		ug/L	*0.200*		*79.9*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.165*		ug/L	*0.200*		*82.5*	*30-130*			

CERTIFICATE OF ANALYSIS

M0J1351

Analytical Testing Parameters

Client Sample ID: 21441-A
Sample Matrix: Aqueous
Lab Sample ID: M0J1351-01 **Collection Date:** 10/13/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2139	CAS
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2139	CAS
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2139	CAS
Aroclor-1242 (PCB-1242)	**697**	50.0	ug/L	100		10/20/20 1100	10/22/20 1227	CAS
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2139	CAS
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2139	CAS
Aroclor-1260 (PCB-1260)	**1050**	50.0	ug/L	100		10/20/20 1100	10/22/20 1227	CAS
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	222	Limit: 30-132	% Rec	1	**S1, S4**	10/20/20 1100	10/20/20 2139	CAS
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	319	Limit: 30-132	% Rec	100	**S3**	10/20/20 1100	10/22/20 1227	CAS
Surrogate: Decachlorobiphenyl (BZ-209)	576	Limit: 30-130	% Rec	1	**S1, S4**	10/20/20 1100	10/20/20 2139	CAS
Surrogate: Decachlorobiphenyl (BZ-209)	127	Limit: 30-130	% Rec	100	**S3**	10/20/20 1100	10/22/20 1227	CAS

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0J1105	B0J1105-BLK1	
		B0J1105-BS1	
		B0J1105-BSD1	
		M0J1351-01	21441-A
		M0J1351-01RE1	21441-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0J1105 - 3510C_8082 - EPA 8082A										
Blank (B0J1105-BLK1)			Prepared & Analyzed: 10/20/2020							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.184*		ug/L	*0.200*		*92.1*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.130*		ug/L	*0.200*		*64.9*	*30-130*			

CERTIFICATE OF ANALYSIS

M0J1352

Analytical Testing Parameters

Client Sample ID: 21442-A
Sample Matrix: Aqueous
Lab Sample ID: M0J1352-01 **Collection Date:** 10/14/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2157	CAS
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2157	CAS
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2157	CAS
Aroclor-1242 (PCB-1242)	**377**	25.0	ug/L	50		10/20/20 1100	10/22/20 1209	CAS
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2157	CAS
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		10/20/20 1100	10/20/20 2157	CAS
Aroclor-1260 (PCB-1260)	**200**	25.0	ug/L	50		10/20/20 1100	10/22/20 1209	CAS
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	174	Limit: 30-132	% Rec	1	**S1, S4**	10/20/20 1100	10/20/20 2157	CAS
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	647	Limit: 30-132	% Rec	50	**S3**	10/20/20 1100	10/22/20 1209	CAS
Surrogate: Decachlorobiphenyl (BZ-209)	329	Limit: 30-130	% Rec	1	**S1, S4**	10/20/20 1100	10/20/20 2157	CAS
Surrogate: Decachlorobiphenyl (BZ-209)	338	Limit: 30-130	% Rec	50	**S3**	10/20/20 1100	10/22/20 1209	CAS

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0J1105	B0J1105-BLK1	
		B0J1105-BS1	
		B0J1105-BSD1	
		M0J1352-01	21442-A
		M0J1352-01RE1	21442-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0J1105 - 3510C_8082 - EPA 8082A										
Blank (B0J1105-BLK1)			Prepared & Analyzed: 10/20/2020							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.184*		ug/L	*0.200*		*92.1*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.130*		ug/L	*0.200*		*64.9*	*30-130*			

CERTIFICATE OF ANALYSIS

M0J1878

Analytical Testing Parameters

Client Sample ID: 21443-A
Sample Matrix: Aqueous
Lab Sample ID: M0J1878-01 **Collection Date:** 10/21/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1	**Q3**	10/27/20 1105	11/03/20 1956	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		10/27/20 1105	11/03/20 1956	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		10/27/20 1105	11/03/20 1956	ECL
Aroclor-1242 (PCB-1242)	**117**	25.0	ug/L	50		10/27/20 1105	11/04/20 1840	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		10/27/20 1105	11/03/20 1956	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		10/27/20 1105	11/03/20 1956	ECL
Aroclor-1260 (PCB-1260)	**204**	25.0	ug/L	50		10/27/20 1105	11/04/20 1840	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	162	Limit: 30-132	% Rec	1	**S1**	10/27/20 1105	11/03/20 1956	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	122	Limit: 30-132	% Rec	50	**S3**	10/27/20 1105	11/04/20 1840	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	27.6	Limit: 30-130	% Rec	1	**S2**	10/27/20 1105	11/03/20 1956	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	50	**S3**	10/27/20 1105	11/04/20 1840	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0J1512	B0J1512-BLK1	
		B0J1512-BS1	
		B0J1512-BSD1	
		M0J1878-01	21443-A
		M0J1878-01RE1	21443-A

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0K0246	B0K0246-BLK1	
		B0K0246-BS1	
		B0K0246-BSD1	

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0J1512 - 3510C_8082 - EPA 8082A										
Blank (B0J1512-BLK1)				Prepared: 10/27/2020 Analyzed: 11/03/2020						
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							

CERTIFICATE OF ANALYSIS

M0J2105

Analytical Testing Parameters

Client Sample ID: 21441-A
Sample Matrix: Aqueous
Lab Sample ID: M0J2105-01 **Collection Date:** 10/27/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		11/02/20 1647	11/03/20 2124	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		11/02/20 1647	11/03/20 2124	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		11/02/20 1647	11/03/20 2124	ECL
Aroclor-1242 (PCB-1242)	**290**	50.0	ug/L	100		11/02/20 1647	11/04/20 1857	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		11/02/20 1647	11/03/20 2124	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		11/02/20 1647	11/03/20 2124	ECL
Aroclor-1260 (PCB-1260)	**645**	50.0	ug/L	100		11/02/20 1647	11/04/20 1857	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	203	Limit: 30-132	% Rec	1	**S1**	11/02/20 1647	11/03/20 2124	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	254	Limit: 30-132	% Rec	100	**S3**	11/02/20 1647	11/04/20 1857	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	79.1	Limit: 30-130	% Rec	1		11/02/20 1647	11/03/20 2124	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	11/02/20 1647	11/04/20 1857	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0K0066	B0K0066-BLK1	
		B0K0066-BS1	
		B0K0066-BSD1	
		M0J2105-01	21441-A
		M0J2105-01RE1	21441-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0K0066 - 3510C_8082 - EPA 8082A										
Blank (B0K0066-BLK1)			Prepared: 11/02/2020 Analyzed: 11/03/2020							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.172*		ug/L	*0.200*		*85.9*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.192*		ug/L	*0.200*		*95.8*	*30-130*			

CERTIFICATE OF ANALYSIS

M0K0768

Analytical Testing Parameters

Client Sample ID: 21444-A
Sample Matrix: Aqueous
Lab Sample ID: M0K0768-01 **Collection Date:** 11/10/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		11/12/20 1110	11/13/20 1423	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		11/12/20 1110	11/13/20 1423	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		11/12/20 1110	11/13/20 1423	ECL
Aroclor-1242 (PCB-1242)	**37.0**	5.00	ug/L	10		11/12/20 1110	11/13/20 1440	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		11/12/20 1110	11/13/20 1423	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		11/12/20 1110	11/13/20 1423	ECL
Aroclor-1260 (PCB-1260)	**30.9**	5.00	ug/L	10		11/12/20 1110	11/13/20 1440	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	153	Limit: 30-132	% Rec	1	**S1**	11/12/20 1110	11/13/20 1423	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	158	Limit: 30-132	% Rec	10	**S1**	11/12/20 1110	11/13/20 1440	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	34.6	Limit: 30-130	% Rec	1		11/12/20 1110	11/13/20 1423	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	46.3	Limit: 30-130	% Rec	10		11/12/20 1110	11/13/20 1440	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0K0644	B0K0644-BLK1	
		B0K0644-BS1	
		B0K0644-BSD1	
		M0K0768-01	21444-A
		M0K0768-01RE1	21444-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0K0644 - 3510C_8082 - EPA 8082A										
Blank (B0K0644-BLK1)			Prepared: 11/12/2020 Analyzed: 11/13/2020							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.173*		ug/L	*0.200*		*86.5*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.149*		ug/L	*0.200*		*74.3*	*30-130*			

CERTIFICATE OF ANALYSIS

M0K1905

Analytical Testing Parameters

Client Sample ID: 21445-A
Sample Matrix: Aqueous
Lab Sample ID: M0K1905-01 **Collection Date:** 11/24/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Dilution	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A								
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L	1		11/30/20 1100	11/30/20 2136	ECL
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L	1		11/30/20 1100	11/30/20 2136	ECL
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L	1		11/30/20 1100	11/30/20 2136	ECL
Aroclor-1242 (PCB-1242)	**990**	50.0	ug/L	100		11/30/20 1100	11/30/20 2211	ECL
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L	1		11/30/20 1100	11/30/20 2136	ECL
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L	1		11/30/20 1100	11/30/20 2136	ECL
Aroclor-1260 (PCB-1260)	**1060**	50.0	ug/L	100		11/30/20 1100	11/30/20 2211	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	248	Limit: 30-132	% Rec	1	**S1**	11/30/20 1100	11/30/20 2136	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	241	Limit: 30-132	% Rec	100	**S3**	11/30/20 1100	11/30/20 2211	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	210	Limit: 30-130	% Rec	1	**S1**	11/30/20 1100	11/30/20 2136	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	11/30/20 1100	11/30/20 2211	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0K1622	B0K1622-BLK1	
		B0K1622-BS1	
		B0K1622-BSD1	
		M0K1905-01	21445-A
		M0K1905-01RE1	21445-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0K1622 - 3510C_8082 - EPA 8082A										
Blank (B0K1622-BLK1)			Prepared & Analyzed: 11/30/2020							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.149*		ug/L	*0.200*		*74.6*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.144*		ug/L	*0.200*		*71.8*	*30-130*			

CERTIFICATE OF ANALYSIS

M0L0979

Analytical Testing Parameters

Client Sample ID: 21445-A Resample
Sample Matrix: Aqueous
Lab Sample ID: M0L0979-01 **Collection Date:** 12/10/2020 0:01

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	MDL	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Method: EPA 3510C/EPA 8082A				**Method Notes:** D3					
Aroclor-1016 (PCB-1016)	<5.05		5.05	ug/L	10		12/15/20 1700	12/16/20 1355	ECL
Aroclor-1221 (PCB-1221)	<5.05		5.05	ug/L	10		12/15/20 1700	12/16/20 1355	ECL
Aroclor-1232 (PCB-1232)	<5.05		5.05	ug/L	10		12/15/20 1700	12/16/20 1355	ECL
Aroclor-1242 (PCB-1242)	**34.5**		5.05	ug/L	10		12/15/20 1700	12/16/20 1355	ECL
Aroclor-1248 (PCB-1248)	<5.05		5.05	ug/L	10		12/15/20 1700	12/16/20 1355	ECL
Aroclor-1254 (PCB-1254)	<5.05		5.05	ug/L	10		12/15/20 1700	12/16/20 1355	ECL
Aroclor-1260 (PCB-1260)	**36.2**		5.05	ug/L	10		12/15/20 1700	12/16/20 1355	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	62.5	Limit: 30-132		% Rec	10		12/15/20 1700	12/16/20 1355	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	27.7	Limit: 30-130		% Rec	10	**S2**	12/15/20 1700	12/16/20 1355	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0L0826	B0L0826-BLK1	
		B0L0826-BS1	
		B0L0826-BSD1	
		M0L0979-01	21445-A Resample

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L0826 - 3510C_8082 - EPA 8082A										
Blank (B0L0826-BLK1)			Prepared: 12/15/2020 Analyzed: 12/16/2020							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.128*		ug/L	*0.200*		*64.2*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.147*		ug/L	*0.200*		*73.4*	*30-130*			
LCS (B0L0826-BS1)			Prepared: 12/15/2020 Analyzed: 12/16/2020							
Aroclor-1016 (PCB-1016)	2.24	0.500	ug/L	2.50		89.5	46-150			
Aroclor-1260 (PCB-1260)	2.42	0.500	ug/L	2.50		96.8	45-150			

CERTIFICATE OF ANALYSIS

M0L1840

Analytical Testing Parameters

Client Sample ID: 21447-A
Sample Matrix: Aqueous
Lab Sample ID: M0L1840-01 **Collection Date:** 12/23/2020

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A			**Method Notes:** D3					
Aroclor-1242 (PCB-1242)	**285**	50.0	ug/L	100		12/29/20 0840	12/31/20 1508	ECL
Aroclor-1260 (PCB-1260)	**320**	50.0	ug/L	100		12/29/20 0840	12/31/20 1508	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	0	Limit: 30-132	% Rec	100	**S3**	12/29/20 0840	12/31/20 1508	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	0	Limit: 30-130	% Rec	100	**S3**	12/29/20 0840	12/31/20 1508	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0L1560	B0L1560-BLK1	
		B0L1560-BS1	
		B0L1560-BSD1	
		M0L1840-01	21447-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1560 - 3510C_8082 - EPA 8082A										
Blank (B0L1560-BLK1)			Prepared: 12/29/2020 Analyzed: 12/30/2020							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.128*		ug/L	*0.200*		*63.8*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.115*		ug/L	*0.200*		*57.4*	*30-130*			
LCS (B0L1560-BS1)			Prepared: 12/29/2020 Analyzed: 12/30/2020							
Aroclor-1016 (PCB-1016)	1.93	0.500	ug/L	2.50		77.3	46-150			
Aroclor-1260 (PCB-1260)	1.83	0.500	ug/L	2.50		73.2	45-150			
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.125*		ug/L	*0.200*		*62.6*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.0798*		ug/L	*0.200*		*39.9*	*30-130*			
LCS Dup (B0L1560-BSD1)			Prepared: 12/29/2020 Analyzed: 12/30/2020							
Aroclor-1016 (PCB-1016)	2.05	0.500	ug/L	2.50		82.0	46-150	5.92	30	
Aroclor-1260 (PCB-1260)	1.93	0.500	ug/L	2.50		77.3	45-150	5.36	30	

CERTIFICATE OF ANALYSIS

M0L2035

Analytical Testing Parameters

Client Sample ID: 21448-A
Sample Matrix: Aqueous
Lab Sample ID: M0L2035-01 **Collection Date:** 12/29/2020

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082A			**Method Notes:** D3					
Aroclor-1016 (PCB-1016)	<5.00	5.00	ug/L	10		12/31/20 0950	01/04/21 1523	ECL
Aroclor-1221 (PCB-1221)	<5.00	5.00	ug/L	10		12/31/20 0950	01/04/21 1523	ECL
Aroclor-1232 (PCB-1232)	<5.00	5.00	ug/L	10		12/31/20 0950	01/04/21 1523	ECL
Aroclor-1242 (PCB-1242)	**141**	5.00	ug/L	10		12/31/20 0950	01/04/21 1523	ECL
Aroclor-1248 (PCB-1248)	<5.00	5.00	ug/L	10		12/31/20 0950	01/04/21 1523	ECL
Aroclor-1254 (PCB-1254)	<5.00	5.00	ug/L	10		12/31/20 0950	01/04/21 1523	ECL
Aroclor-1260 (PCB-1260)	**41.8**	5.00	ug/L	10		12/31/20 0950	01/04/21 1523	ECL
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	136	Limit: 30-132	% Rec	10	**S1**	12/31/20 0950	01/04/21 1523	ECL
Surrogate: Decachlorobiphenyl (BZ-209)	278	Limit: 30-130	% Rec	10	**S1**	12/31/20 0950	01/04/21 1523	ECL

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082A	B0L1688	B0L1688-BLK1	
		B0L1688-BS1	
		B0L1688-BSD1	
		M0L2035-01	21448-A

Batch Quality Control Summary: Microbac Laboratories Inc., - Marietta, OH

Polychlorinated Biphenyls (PCBs) by GC/ECD	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0L1688 - 3510C_8082 - EPA 8082A										
Blank (B0L1688-BLK1)			Prepared: 12/31/2020 Analyzed: 01/04/2021							
Aroclor-1016 (PCB-1016)	<0.500	0.500	ug/L							
Aroclor-1221 (PCB-1221)	<0.500	0.500	ug/L							
Aroclor-1232 (PCB-1232)	<0.500	0.500	ug/L							
Aroclor-1242 (PCB-1242)	<0.500	0.500	ug/L							
Aroclor-1248 (PCB-1248)	<0.500	0.500	ug/L							
Aroclor-1254 (PCB-1254)	<0.500	0.500	ug/L							
Aroclor-1260 (PCB-1260)	<0.500	0.500	ug/L							
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.132*		ug/L	*0.200*		*66.1*	*30-132*			
Surrogate: Decachlorobiphenyl (BZ-209)	*0.214*		ug/L	*0.200*		*107*	*30-130*			
LCS (B0L1688-BS1)			Prepared: 12/31/2020 Analyzed: 01/04/2021							
Aroclor-1016 (PCB-1016)	2.09	0.500	ug/L	2.50		83.5	46-150			
Aroclor-1260 (PCB-1260)	2.59	0.500	ug/L	2.50		104	45-150			
Surrogate: 2,4,5,6-Tetrachloro-m-xylene	*0.138*		ug/L	*0.200*		*69.1*	*30-132*			

SECTION VI

VOLUME OF LTS EFFLUENT PRODUCED

Effluent Produced by Month in 2020
CECOS International, Williamsburg, Ohio

Month	Leachate Produced (gallons)
January	**35,900**
February	**25,500**
March	**51,000**
April	**20,400**
May	**20,500**
June	**45,900**
July	**15,400**
August	**25,500**
September	**5,000**
October	**10,100**
November	**40,900**
December	**10,200**
2020 Total	**306,300**